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ACIDIC PRECIPITATION IN ONTARIO STUDY

1981 SUMMARY STATISTICS OF OBSERVED CONCENTRATION AND DEPOSITION DAILY PRECIPITATION MONITORING NETWORK

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Ministry
of the
Environment

The Honourable
Andrew S. Brandt
Minister
Gérard J. M. Raymond
Deputy Minister

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ACIDIC PRECIPITATION IN ONTARIO STUDY

1981 SUMMARY STATISTICS OF OBSERVED CONCENTRATION AND DEPOSITION DAILY PRECIPITATION MONITORING NETWORK

Richard W. Kirk and Walter H. Chan
Special Studies Unit
Atmospheric Research and Special Program Section
Ontario Ministry of the Environment
Air Resources Branch
880 Bay Street, 4th Floor
Toronto, Ontario
Canada, M5S 1Z8

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A.P.I.O.S. Coordination Office
Ontario Ministry of the Environment
6th Floor, 40 St. Clair Avenue West
Toronto, Ontario
Canada, M4V 1P5
Project Co-ordinator: Dr. T. G. Brydges

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PART I
INTRODUCTION

INTRODUCTION

The graphical and statistical summaries presented in this report pertain to the 1981 analytical results obtained from the Acidic Precipitation in Ontario Study (APIOS) daily precipitation monitoring network. The relevant data are listed in a previous report #ARB-19a-82-ARSP. All available data are utilized with the following modifications. Results reported as being unreliable or approximate are not included in the calculations. If it is noted that the actual result is greater than the reported value due to exceedance of upper limit, then the reported value is also excluded. If a detection limit is reported, a value corresponding to one half the detection limit is utilized for statistical calculations as reported in the statistical summaries. The reported precipitation gauge depth (standard rain gauge or nipher shielded snow gauge) is utilized in the calculation of deposition. If a rain gauge value is not available then the collected sample volume is converted to its equivalent precipitation depth and is used in the deposition calculation.

The Bar/Stem.Leaf charts presented in Parts III and IV are obtained from the SAS (Statistical Analysis System) Univariate procedure, SAS User's Guide 1979 Edition. The charting procedure optimizes as to what chart type to produce. Optimization is based upon sample size and range. The Stem.Leaf chart is the preferred type since it has the advantage of presenting more significant figures than the Bar chart. The Bar charts are self explanatory. The Stem.Leaf charts may best be explained by an elementary example.

Example of Stem.Leaf Chart: Conductance umho/cm

Stem	Leaf	#
2	<u>555556666778999</u>	15
multiply stem.leaf by 10***01		

This chart would be interpreted as follows: of the 15 reported values, 5 results are equal to 2.5×10 umho/cm, 4 results are equal 2.6×10 umho/cm, 2 results are equal 2.7×10 umho/cm, 1 result is equal 2.8×10 umho/cm and 3 results are equal 2.9×10 umho/cm. It should be noted however that all the original significant figures may not be represented.

The statistical summaries presented in Parts V to VIII include mean (arithmetic/geometric), standard deviation (arithmetic/geometric), sample size, maximum, minimum, quartiles and volume weighted averages using precipitation gauge depths where appropriate. Users may assess the meaning of the statistical summaries in light of the sample distributions given in Parts IX and X.

The distribution of the observed concentrations and depositions is examined by calculating the skewness, kurtosis and D-statistic of the observed results and log-transformed observed results. Ideal skewness and kurtosis for a normal distribution are 0 and 3 respectively. Skewness is considered to be significant if calculated to be less than -1 or greater than +1. The Kolmogorov-Smirnov D-statistic is calculated and compared to a critical value. If the D-statistic exceeds the critical value then the null hypothesis of normality is rejected. In this report, the 95% confidence level is used. Note that, according to this analysis, with the exception of the soil-related substances, few of the measured parameters are normally distributed, even when the values are log-transformed.

PART II

STATION DESCRIPTION AND LOCATION MAP



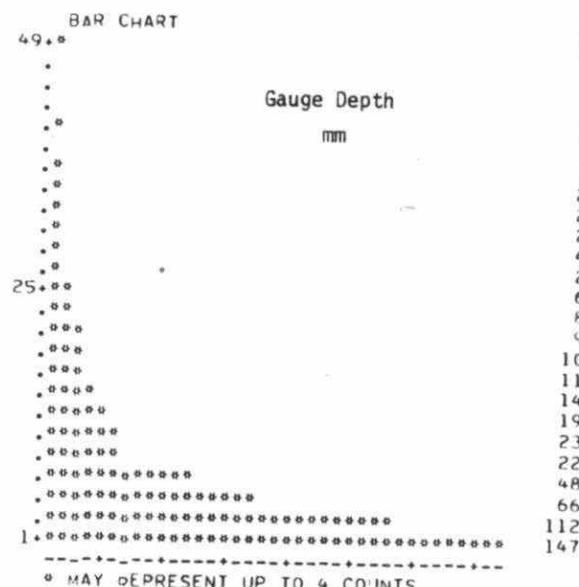
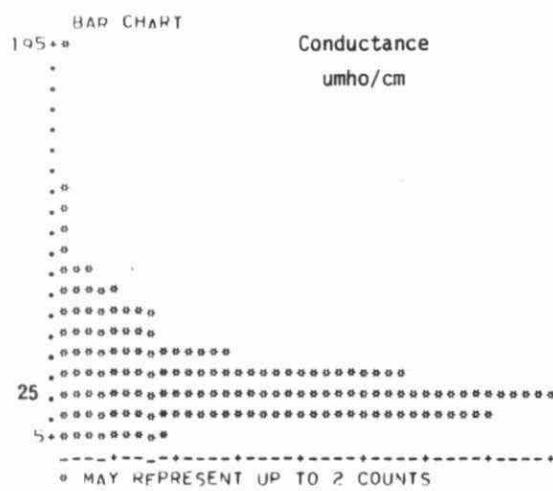
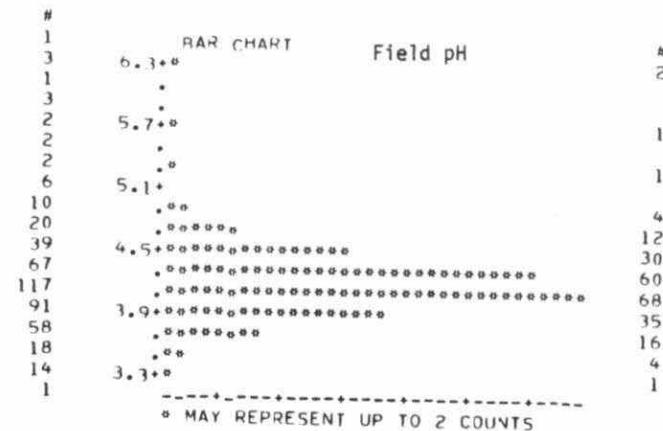
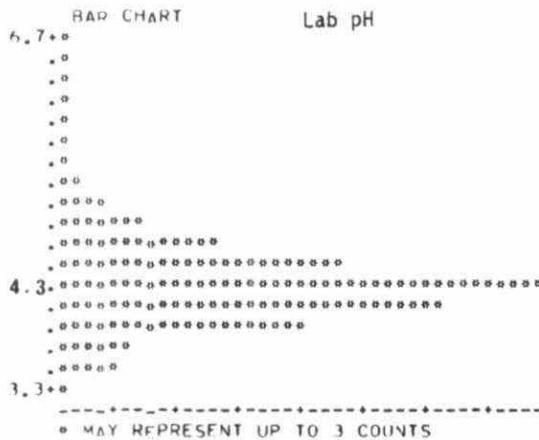
APIOS EVENT DEPOSITION NETWORK SITE LOCATIONS

AREA	MOE REGION	STATION NAME	ELEVATION (m above MSL)	LATITUDE (North)	LONGITUDE (West)	UTM COORDINATES (Northing)	(Easting)
London	Southwestern	Longwoods Conservations Area	239	42°53'	81°29'	4747850	460700
		Melbourne	213	42°47'	81°33'	4736850	454600
		North Easthope	375	43°02'	80°53'	4805650	508650
		Wellesley	344	43°02'	80°46'	4812650	519500
Dorset	Central	Dorset Lab	320	45°13'	78°56'	5009600	662450
		Nithgrove	325	45°12'	79°04'	5006800	651600
		Balsam Lake Provincial Park	259	44°38'	78°51'	4943400	670070
		Raven Lake	274	44°37'	78°54'	4941600	665750
Kingston	Southeastern	Charleston Lake Provincial Park	92	44°30'	76°03'	4927500	417150
		Graham Lake	130	44°35'	75°52'	4936750	431450
		Railton	137	44°29'	76°49'	4927200	355100
		Whitman Creek	137	44°29'	76°49'	4927200	355100
Thunder Bay	Northwestern	Fernberg	506	47°50'	91°52'	5316000	585000
		Lac la Croix	368	48°21'	92°12'	5356000	558200
		Forbes Twsp.	324	48°38'	89°37'	5388000	308000
		Quetico Centre	420	48°45'	91°12'	5399000	632000

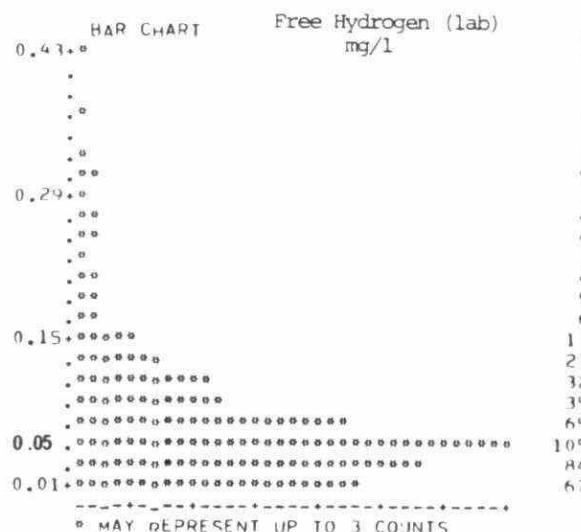
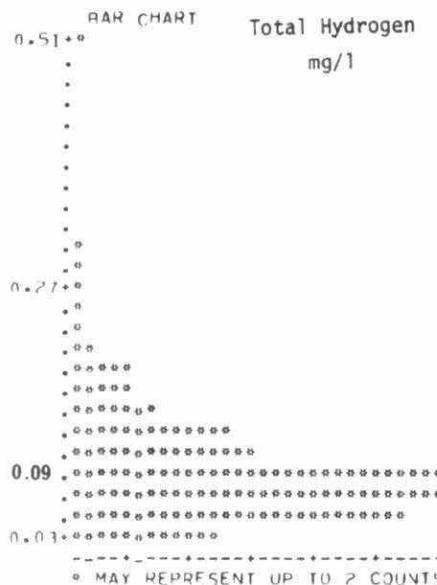
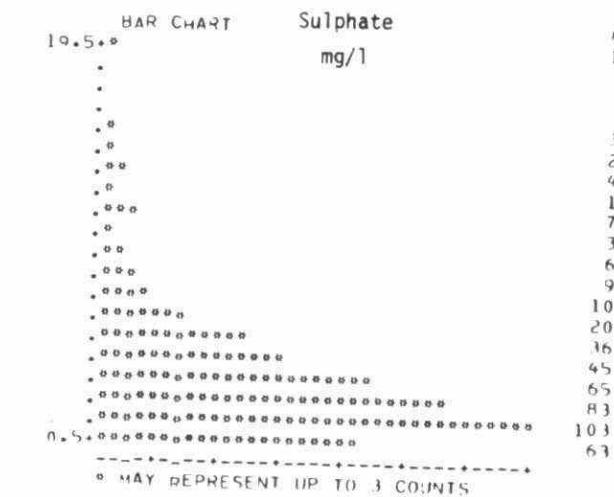
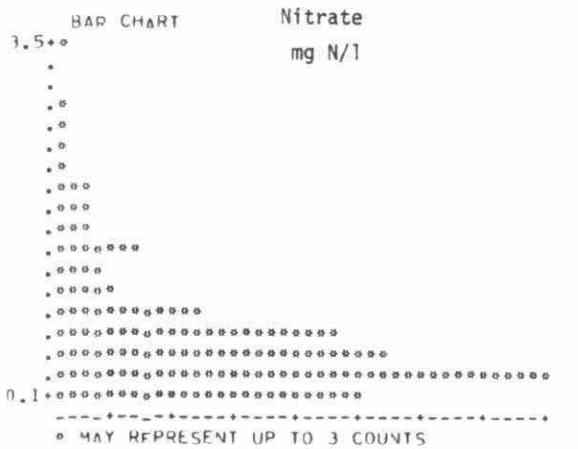
PART III

BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION BY REGION

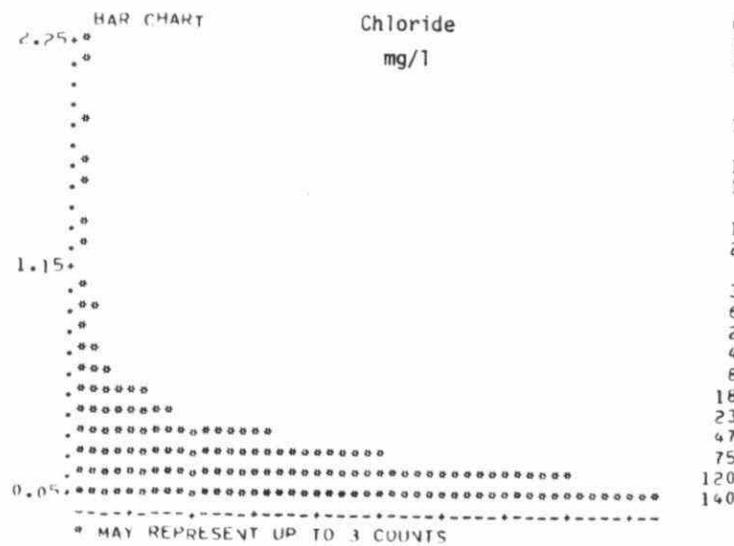
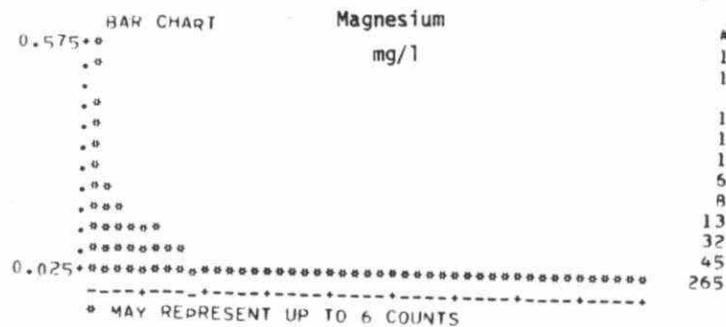
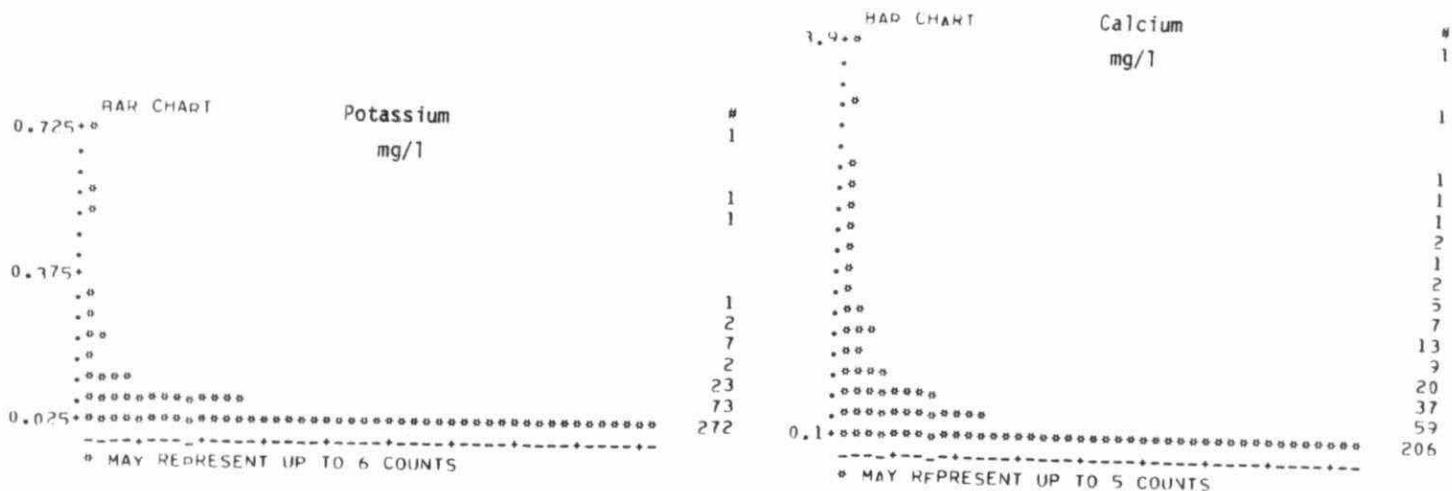
BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION
CENTRAL REGION



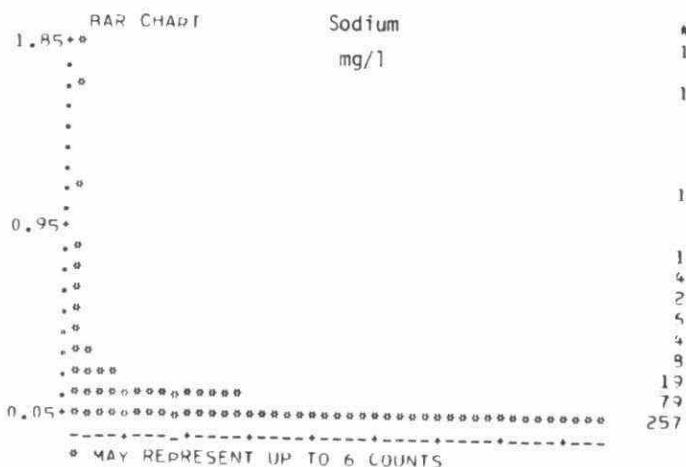
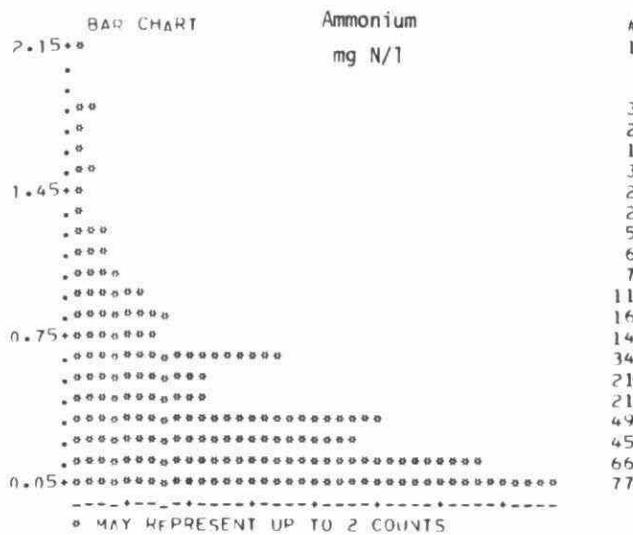
BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION
CENTRAL REGION



BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION
CENTRAL REGION



BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION
CENTRAL REGION



BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION
NORTHWESTERN REGION

STEM	LEAF	Lab	pH	#
59	8			1
58				
57				
56				
55	2			1
54				
53	29			2
52	*			
51	268			3
50	00231678			8
49	027			3
48	1233478			7
47	03444599			8
46	01122267888			11
45	045			3
44	12467777889			11
43	03331467888			11
42	1134577789			9
41	1124778889			10
40				
39	00			2
38	22			2
37	6			1
36				
35	6			1

STEM	LEAF	#
11	9	1
11		
10		
10		
9		
9		
8		
8		
7		
7	4	1
6		
6	?	1
5		
5		
4		
4		
3		
3	114	3
2	55556	5
2	0122233444	10
1	5566789	7
1	000012222334	12
0	5556666777788999	16
0	4	1
<hr/>		
MULTIPLY STEM.LEAF BY 10 ^{0.0001}		

STEM	LEAF	Gauge	Depth
18	9		mm
17			
16			
15	06		
14	02		
13	19		
12	0008		
	11		
	10	0	
		9	
		8	
		7	0599
		6	9
		5	05579999
		4	0000237
		3	022224889
		2	023466688
		1	00000222234666779
		0	111112222333344445555556777788888889

BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION
NORTHWESTERN REGION

STEM LEAF
 34 7
 32
 30
 28
 26 0
 24
 22
 20
 18 86
 16
 14
 12
 10
 8 15689
 6 1178122467
 4 034822344568
 2 001222345557789900233569
 0 00124677890011222333466677889

 MULTIPLY STEM.LEAF BY 10**-01

STEM	LEAF	Free Hydrogen (lab)	
26	5	mg/1	
24			1
22			
20			
18			
16	4		
14	11		2
12	66		
10			2
8			
6	225666882688		12
4	222346777701244689		18
2	0111124445558922334445689		26
0	134577899990012333455556688899		32

MULTIPLY STEM.LEAF BY 10 ⁶ -02			

STEM LEAF	Sulphate
14 0	mg/l
13 3	
12	
11	
10	
9	
8 37	
7 6	
6 5	
5 1	
4	
3 145	
2 33344	
1 00012227333457777888899	
0 1111111222223333334444455566667777888888899	

BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION
NORTHWESTERN REGION

STEM LEAF Calcium mg/l

14	5	1
13		1
12		
11		
10		
9		
8		
7	1	1
6		
5		
4	0005	4
3	28	2
2	02799	5
1	0044445567	10
0	00001122222233333444455555556666667777888889	46

MULTIPLY STEM.LEAF BY 10***-01

STEM	LEAF	Chloride	#
6	0		1
5		mg/l	
5	2		1
4			
4	2		1
3	89		2
3	2		1
2			
2	222344		6
1	55566		5
1	001112244444		12
0	555566667777888889999		22
0	000000000000000112222234444444444		36
-----+-----+-----+-----+-----+-----+-----+-----+-----			
MULTIPLY STEM.LEAF BY 10 ² -01			

BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION
NORTHWESTERN REGION

STEM LEAF	Ammonium	#
25 0	mg N/l	1
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		
14		
13		
12		
11 8		1
10 0		1
9 1		1
8		
7 4		1
6		
5 35		2
4 6		1
3 133569		6
2 001456666666779		15
1 01112244555667		14
0 00011111234555566778999		24

MULTIPLY STEM.LEAF BY 10^{6.0}-01

STEM LEAF	Sodium	#
42 0	mg/l	1
40		
38		
36		
34		
32		
30		
28		
26		
24 000		3
22 0		1
20 00		2
18		
16 00		2
14		
12 000000		6
10 000		3
8 0000		4
6 0000000		7
4 000000		6
2 000000000000000000		18
0 555550000000000000		16

MULTIPLY STEM.LEAF BY 10^{6.0}-02

BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION
SOUTHEASTERN REGION

BAR CHART **Gauge Depth**

mm

2.5+ 5+ 10+ 15+ 20+ 25+ 30+ 35+ 40+ 45+ 50+ 55+

* MAY REPRESENT UP TO 6 COUNTS

BAR CHART

Field pH

BAR CHART

Lab pH

Lab pH Range	Frequency
3.3-3.5	0
3.5-3.7	0
3.7-3.9	0
3.9-4.1	0
4.1-4.3	100
4.3-4.5	90
4.5-4.7	80
4.7-4.9	70
4.9-5.1	60
5.1-5.3	50
5.3-5.5	40
5.5-5.7	30
5.7-5.9	20
5.9-6.1	10
6.1-6.3	5
6.3-6.5	0
6.5-6.7	0
6.7-6.9	0

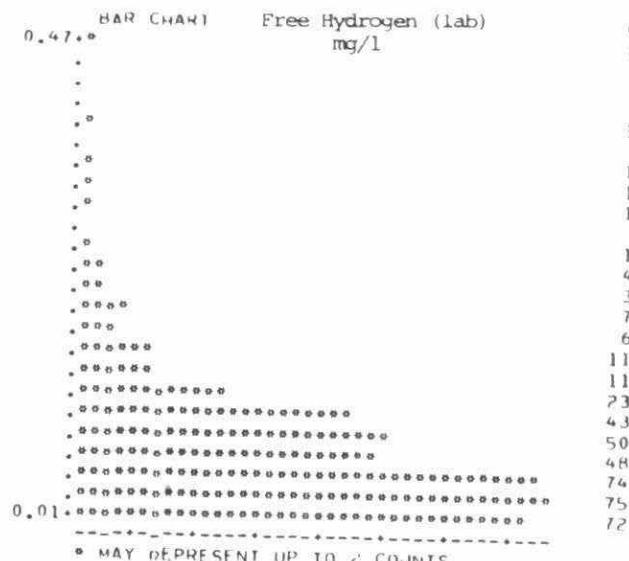
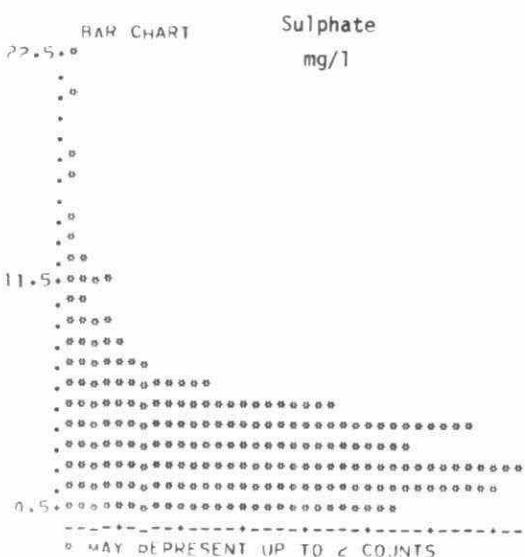
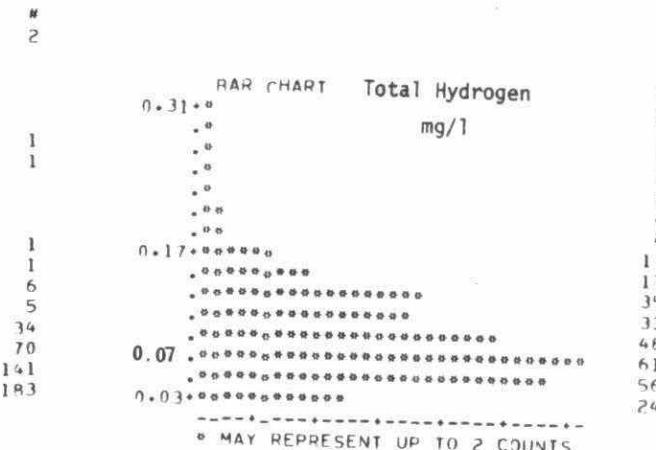
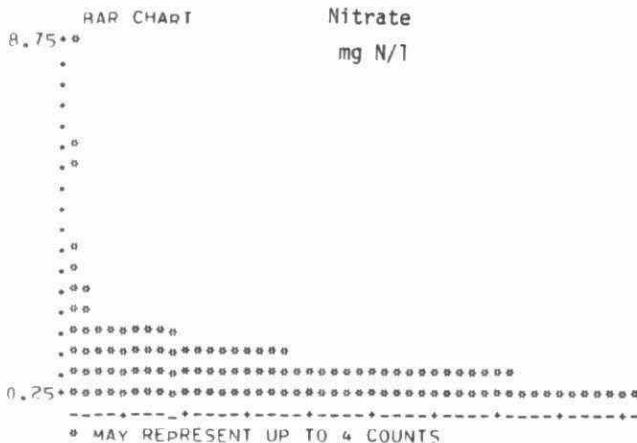
* MAY REPRESENT UP TO 2 COUNTS

RAD CHART

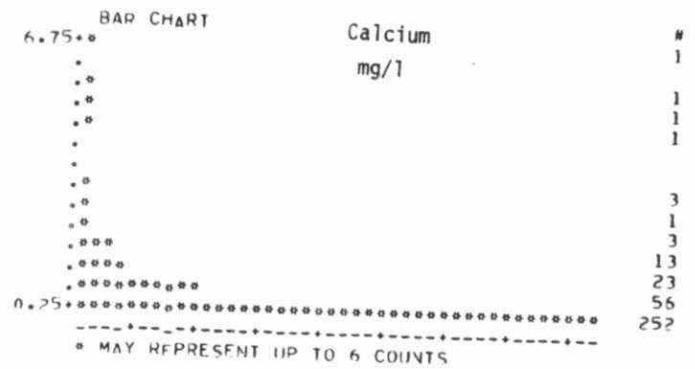
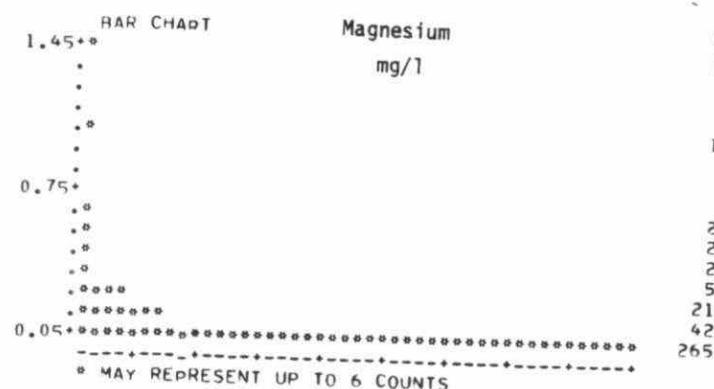
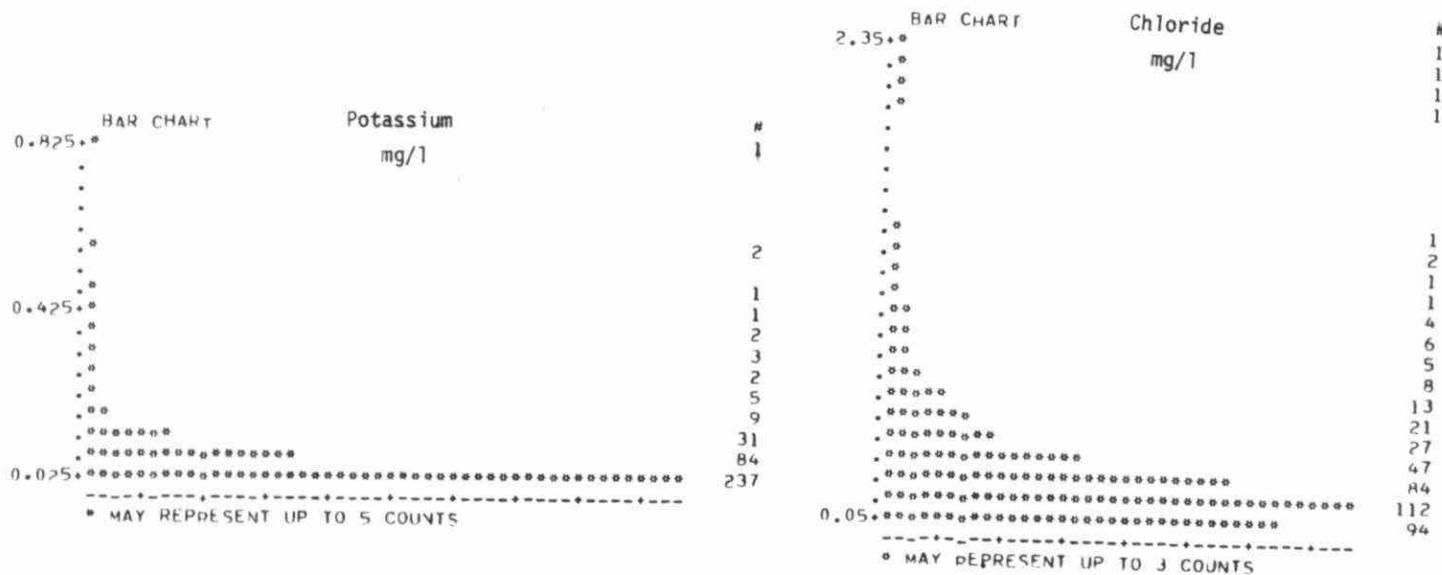
Conductance
umho/cm

• MAY REPRESENT UP TO 2 COUNTS

BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION
SOUTHEASTERN REGION



BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION
SOUTHEASTERN REGION



BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION
SOUTHEASTERN REGION

BAR CHART

Time Point	Sodium (mg/l)
0	0.025+
1	0.025+
2	0.025+
3	0.025+
4	0.025+
5	0.025+
6	0.025+
7	0.025+
8	0.025+
9	0.025+
10	0.025+
11	0.025+
12	0.025+
13	0.025+
14	0.025+
15	0.025+
16	0.025+
17	0.025+
18	0.025+
19	0.025+
20	0.025+
21	0.025+
22	0.025+
23	0.025+
24	0.025+
25	0.025+
26	0.025+
27	0.025+
28	0.025+
29	0.025+
30	0.025+
31	0.025+
32	0.025+
33	0.025+
34	0.025+
35	0.025+
36	0.025+
37	0.025+
38	0.025+
39	0.025+
40	0.025+
41	0.025+
42	0.025+
43	0.025+
44	0.025+
45	0.025+
46	0.025+
47	0.025+
48	0.025+
49	0.025+
50	0.025+
51	0.025+
52	0.025+
53	0.025+
54	0.025+
55	0.025+
56	0.025+
57	0.025+
58	0.025+
59	0.025+
60	0.025+
61	0.025+
62	0.025+
63	0.025+
64	0.025+
65	0.025+
66	0.025+
67	0.025+
68	0.025+
69	0.025+
70	0.025+
71	0.025+
72	0.025+
73	0.025+
74	0.025+
75	0.025+
76	0.025+
77	0.025+
78	0.025+
79	0.025+
80	0.025+
81	0.025+
82	0.025+
83	0.025+
84	0.025+
85	0.025+
86	0.025+
87	0.025+
88	0.025+
89	0.025+
90	0.025+
91	0.025+
92	0.025+
93	0.025+
94	0.025+
95	0.025+
96	0.025+
97	0.025+
98	0.025+
99	0.025+
100	0.025+
101	0.025+
102	0.025+
103	0.025+
104	0.025+
105	0.025+
106	0.025+
107	0.025+

* MAY REPRESENT UP TO 3 COUNTS

BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION
SOUTHWESTERN REGION

BAR CHART
6.9**

* MAY REPRESENT UP TO 2 COUNTS

```

#      STEM LEAF
#      68 9
1      66
1      64
1      62
5      60 3
5      58 2565
1      56 6
5      54
7      52 9
18     50 5
31     48 00347716
62     46 13711236799
79     44 056668889014457
79     42 01111112233455667778999000024556778
47     40 00345566677999112334566677799
33     38 2255112567777899
9      36 789
4      34 3
1
-----+
MULTIPLY STEM,LEAF BY 10**-01

```

MULTIPLY STEM-LEAF BY 10**-01

STEM LEAF

13	7	
13		
12		
12	04	
11	6	
11	1	Conductance
10	66	umho/cm
10	14	
9	57	
9	01	
8	559	
8	114	
7	555666678	
7	012	
6	5	
6	1244	
5	77888899	
5	000001112233344	
4	55556777888899	
4	00000011122333344	
3	5555566667778888999	
3	000011111122223333334444	
2	5555555555666666667788889999999	
2	0000000111112222333333344444444	
1	55556666666677778888999999999999	
1	000012222333344444	
0	555667888899999	
0	444	
<hr/>		
MULTIPLY STEM-LEAF BY 10**+01		

MULTIPLY STEM-LEAF BY 10**+01

BAR CHART

	Gauge	Depth	mm	#
62.5**	*			1
	*			1
	*			1
	*			2
	*			1
	*			1
	*			1
32.5**	*			1
	***			3
	***			9
	*****			17
	*****			38
	*****			47
	*****			99
2.5*****	*****	*****	*****	339
-----+-----+-----+-----+-----+-----+-----+-----				
* MAY REPRESENT UP TO 8 COUNTS				

* MAY REPRESENT UP TO 8 COUNTS

BAR/STEM-LEAF CHARTS OF OBSERVED CONCENTRATION

SOUTHWESTERN REGION

BAR CHART

* MAY REPRESENT UP TO 4 COUNTS

840 CHAPTER

MAY REPRESENT UP TO 2 COUNTS

BAR CHART

* MAY REPRESENT UP TO 3 COUNTS

BAR CHART

	Free Hydrogen (lab) mg/l
0.825**	1
*	1
*	1
*	1
*	1
*	1
*	1
0.425**	2
*	1
*	1
*	2
***	6
****	14
*****	26
*****	50
*****	133
*****	153
-----	-----

* MAY REPRESENT UP TO 4 COUNTS

BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION
SOUTHWESTERN REGION

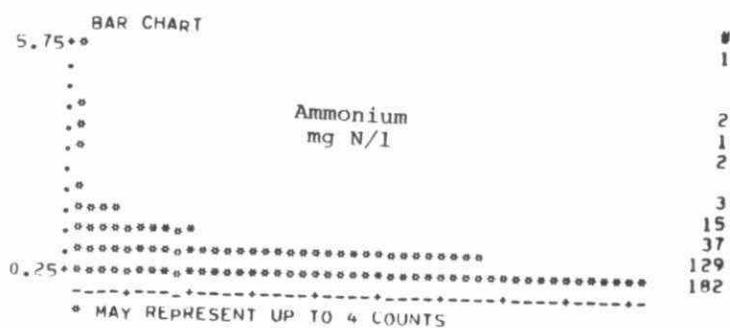
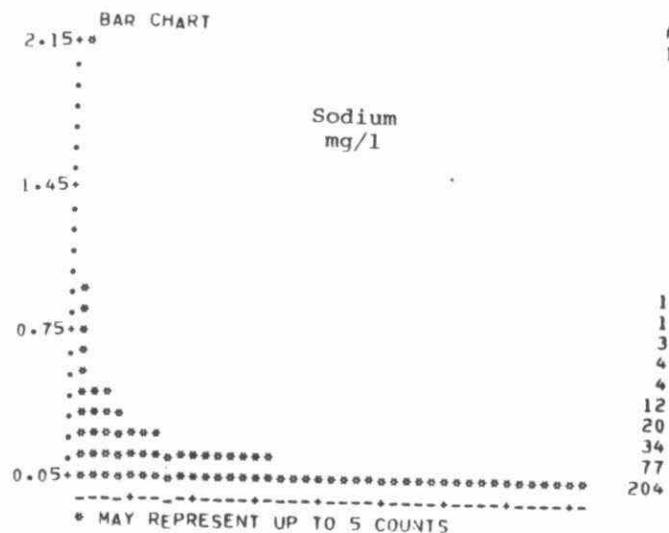
BAR CHART

Potassium
mg/l

* MAY REPRESENT UP TO 5 COUNTS

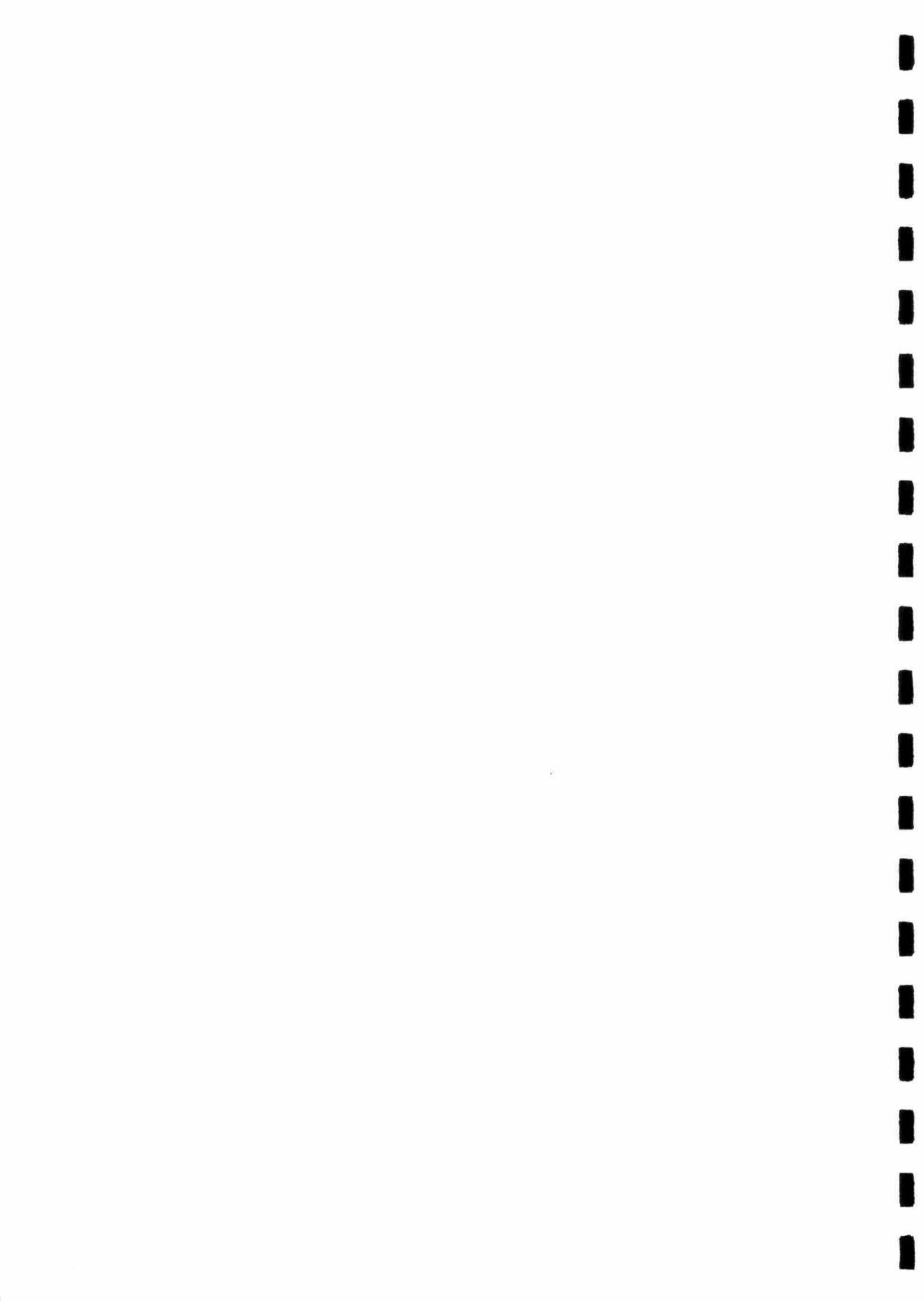
BAR/STEM.LEAF CHARTS OF OBSERVED CONCENTRATION

SOUTHWESTERN REGION



PART IV

BAR/STEM.LEAF CHARTS OF OBSERVED DEPOSITION BY REGION



BAR/STEM.LEAF CHARTS OF OBSERVED DEPOSITION
CENTRAL REGION

BAD CHART
195++

Sulphate
mg/m²

1110

BAR CHART

Year	Sulphate (mg/m**2)
1950	5
1951	10
1952	15
1953	20
1954	25
1955	30
1956	35
1957	40
1958	45
1959	50
1960	55
1961	60
1962	65
1963	70
1964	75
1965	80
1966	85
1967	90
1968	95
1969	100
1970	105
1971	110
1972	115
1973	120
1974	125
1975	130
1976	135
1977	140
1978	145
1979	150
1980	155
1981	160
1982	165
1983	170
1984	175
1985	180
1986	175
1987	170
1988	165
1989	160
1990	155

* MAY REPRESENT UP TO 5 COUNTS

BAR CHART

Total Hydrogen
mg/m**2

111

2092

6.

25.

* MAY REPRESENT UP TO 3 COUNTS

BAR CHART

Free Hydrogen (Lab)
mg/m**2

332

Free Hydrogen (Lab)
mg/m**2

* MAY REPRESENT UP TO 5 COUNTS

BAR CHART
6,75+%

Free Hydrogen (Field mg/m³??

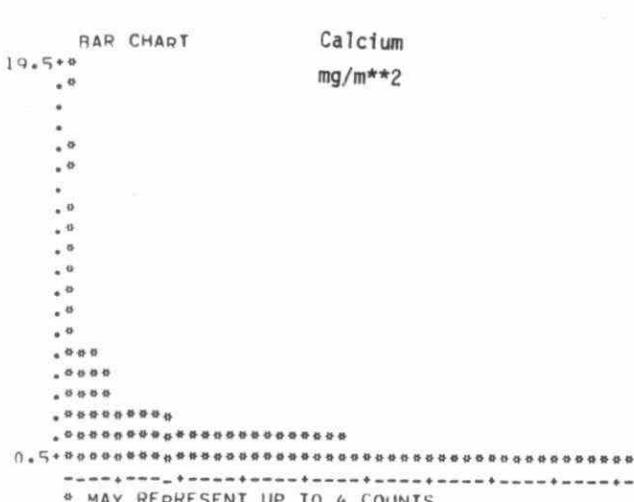
1032

Free Hydrogen (Field)
mg/m²2

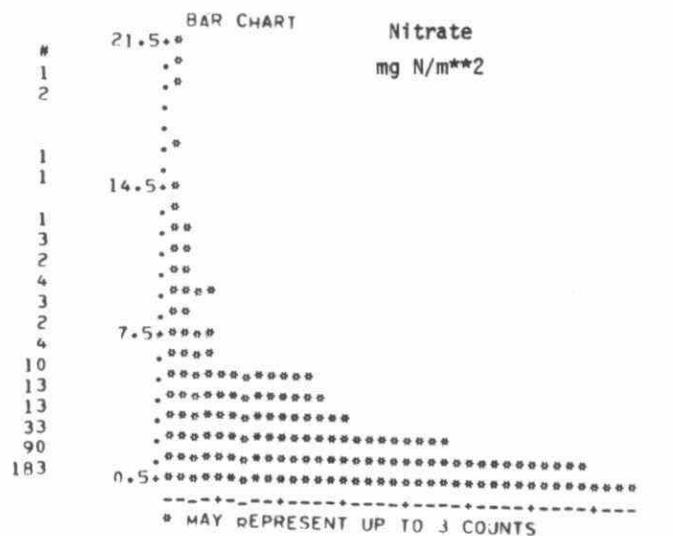
0.25

* MAY REPRESENT UP TO 2 COUNTS

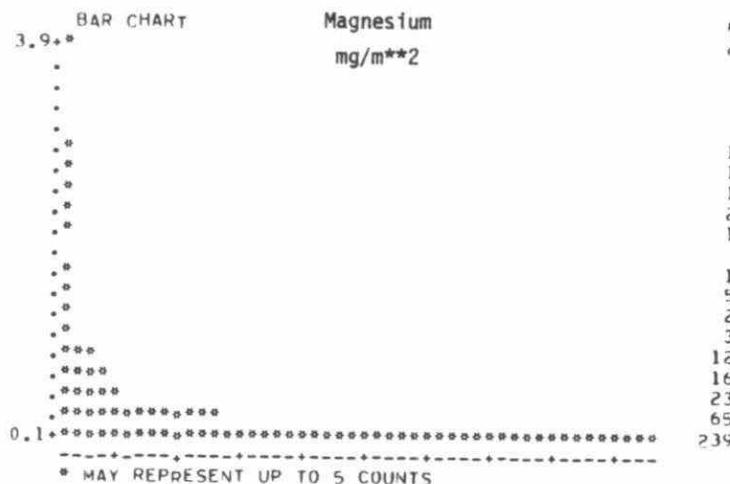
BAR/STEM.LEAF CHARTS OF OBSERVED DEPOSITION
CENTRAL REGION



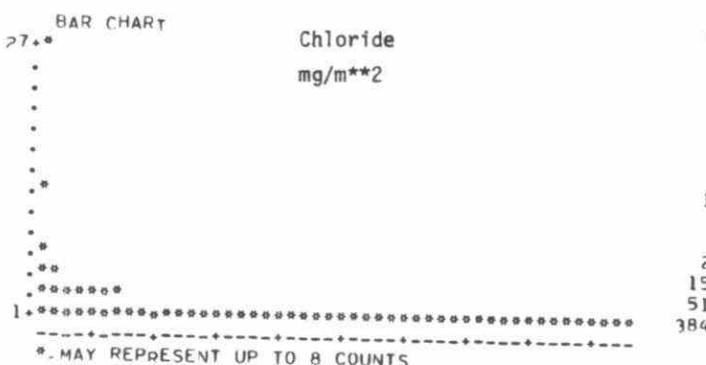
* MAY REPRESENT UP TO 4 COUNTS



* MAY REPRESENT UP TO 3 COUNTS



* MAY REPRESENT UP TO 5 COUNTS



BAR/STEM.LEAF CHARTS OF OBSERVED DEPOSITION
CENTRAL REGION

BAR CHART

Ammonium
mg N/m**2

0.5 1 2 3 4 5 6 7 8 9 10

MAY REPRESENT UP TO 3 COUNTS

BAR CHART

Sodium

$\text{mg/m}^{\star\star 2}$

Energy Bin	Concentration ($\text{mg/m}^{\star\star 2}$)
0.25	0.25
0.50	0.50
0.75	0.75
1.00	1.00
1.25	1.25
1.50	1.50
1.75	1.75
2.00	2.00
2.25	2.25
2.50	2.50
2.75	2.75

* MAY REPRESENT UP TO 6 COUNTS

BAR/STEM.LEAF CHARTS OF OBSERVED DEPOSITION
NORTHWESTERN REGION

STEM LEAF		#	STEM LEAF		#
44 4	Sulphate	1	17 6	Total Hydrogen	1
42	mg/m**2		16	mg/m**2	
40			15		
38			14		
36			13		
34			12 6		
32			11		
30			10 7		
28			9		
26 7		1	8 9		
24			7 9		
22 5		1	6 011		
20 1		1	5 0139		
18 0		1	4 0677		
16			3 001269		
14 2		1	2 00012224469		
12		1	1 1223666888999		
10 2999		4	0 78		
8 0279		4	MULTIPLY STEM.LEAF BY 10**-01		
6 366026		6			
4 2456846		7			
2 23446678000222568		18			
0 0011222227444455666688890011122234455678		41			

STEM LEAF		#	STEM LEAF		#
10 6		1	8 7	Free Hydrogen (Field)	1
10			6 3	mg/m**2	
9 2	Free Hydrogen (Lab)	1	4		
8	mg/m**2		2 12566457		
7			0 44568333		
6			MULTIPLY STEM.LEAF BY 10**-01		
6 2		1			
5					
5 3		1			
4 8		1			
4 0		1			
3 57		2			
3 4		1			
2 5578		1			
2 000224		4			
1 55679		6			
1 1122234		5			
0 55556666777788889		7			
0 0000111111111111111122222222233333344		21			
MULTIPLY STEM.LEAF BY 10**-01		42			

BAR/STEM.LEAF CHARTS OF OBSERVED DEPOSITION
NORTHWESTERN REGION

STEM LEAF Magnesium
 40 6 mg/m**2
 38
 36
 34
 32
 30 00
 28
 26
 24
 22
 20 1
 18
 16 0
 14 000
 12 1
 10
 8 49
 6 5901
 4 345857
 2 003469009
 0 2233374455666688899000000224445556667R9
 -----+-----+-----+-----+-----+-----+-----+
 MULTIPLY STEM.LEAF BY 10**-02

STEM	LEAF	
27	0	Calcium
26		
25		mg/m**2
24		
23		
22		
21	0	1
20		
19		
18		
17		
16		
15	00	2
14	2	1
13		
12	8	1
11	33	2
10	6	
9	5	1
8	378	3
7	289	3
6		
5	2	1
4	56788	5
3	002224	6
2	0024478	7
1	001223445777	12
0	1122344555666667778899	22

BAR/STEM.LEAF CHARTS OF OBSERVED DEPOSITION
NORTHWESTERN REGION

STEM	LEAF	Potassium	#
10	2	mg/m**2	1
9			
8			
7	89		2
7			
6			
6			
5	0		1
4			
4	2		1
3	8		1
3			
2	8		1
2	0444		4
1	5		1
1	011123733344		12
0	556666677778889999		18
0	111111222222223333334444		27
-----+-----+-----+-----+-----			
MULTIPLY STEM,LEAF BY 10**-01			

BAR/STEM.LEAF CHARTS OF OBSERVED DEPOSITION
SOUTHEASTERN REGION

BAR CHART	#	BAR CHART	Sulphate	#
5.3+*	2	265+*	mg/m**2	1
.	.	.		
..	2	..		
..	2	..		1
..	1	..		
..	1	..		
..	2	..		
.	.	..		1
..	1	..		
..	3	..		3
..	1	..		3
2.7+*	2	135+		
..	3	..		2
..	8	..		2
..	6	..		1
..	6	..		3
..	13	..		5
..	10	..		6
..	14	..		14
..	24	..		15
..	30	..		29
..	37	..		33
..	45	..		63
..	51	..		93
0.1+..	34	5+.....		161
-----+-----+-----+-----+-----+-----				
* MAY REPRESENT UP TO 2 COUNTS				
* MAY REPRESENT UP TO 4 COUNTS				

BAR CHART	Free Hydrogen (Lab)	#
3.9+*	mg/m**2	
..	1	
..	1	
..	1	
..	1	
..	2	
..	2	
..	4	
.		
..	5	
..	7	
..	11	
..	9	
..	11	
..	23	
..	32	
..	55	
..	84	
0.1+.....	181	
-----+-----+-----+-----+-----+-----		
* MAY REPRESENT UP TO 4 COUNTS		

BAR CHART	Free Hydrogen (Field)	#
19.5+*	mg/m**2	
..	1	
..	1	
.		
.		
..	1	
.		
..	1	
..	2	
..	1	
..	2	
..	8	
..	10	
..	19	
..	44	
0.5+.....	134	
-----+-----+-----+-----+-----+-----		
* MAY REPRESENT UP TO 3 COUNTS		

BAR/STEM.LEAF CHARTS OF OBSERVED DEPOSITION
SOUTHEASTERN REGION

BAR CHART

2944 Chloride mg/m**2

Category	Chloride (mg/m**2)
1	1.0
2	1.0
3	1.0
4	1.0
5	1.0
6	1.0
7	1.0
8	1.0
9	1.0
10	29.44

* MAY REPRESENT UP TO 7 COUNTS

BAR CHART

Calcium

mg/m²

Sample	Calcium (mg/m ²)
1	1
2	2
3	1
4	4
5	4
6	4
7	15
8	37
9	69
10	212

MAY REPRESENT UP TO 5 COUNTS

BAR CHART

Nitrate

mg N/m²2

62.5+

32.5+

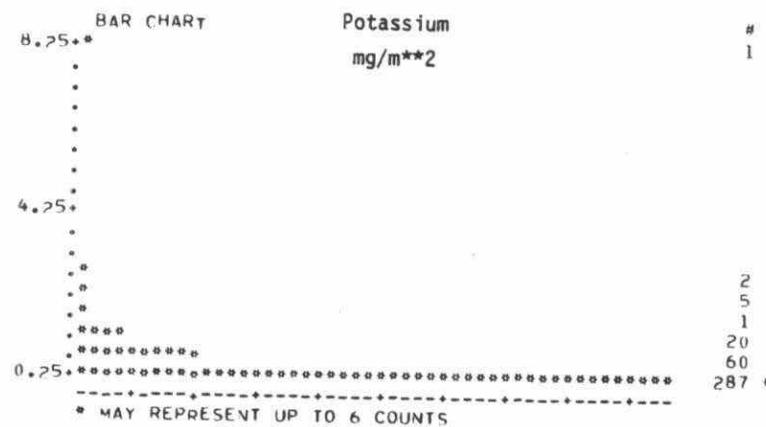
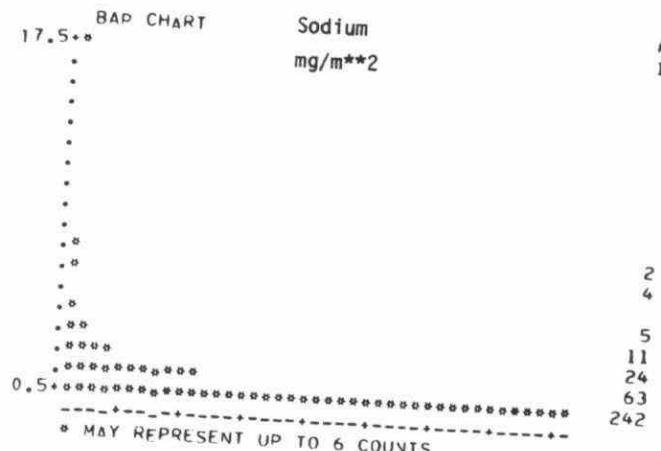
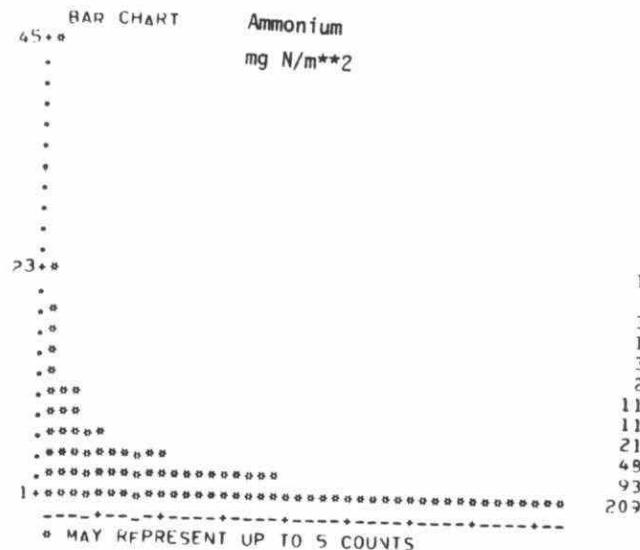
2.5+-----

0 5 10 20 105 300

1970-71 1971-72 1972-73 1973-74 1974-75

* MAY REPRESENT UP TO 7 COUNTS

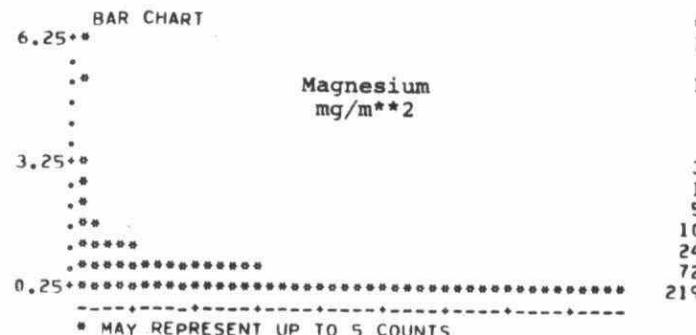
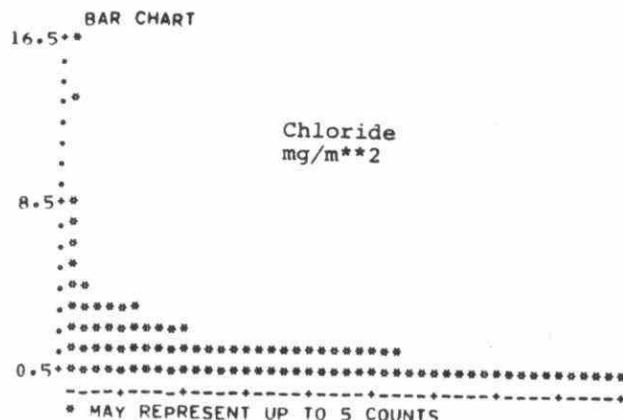
BAR/STEM.LEAF CHARTS OF OBSERVED DEPOSITION
SOUTHEASTERN REGION



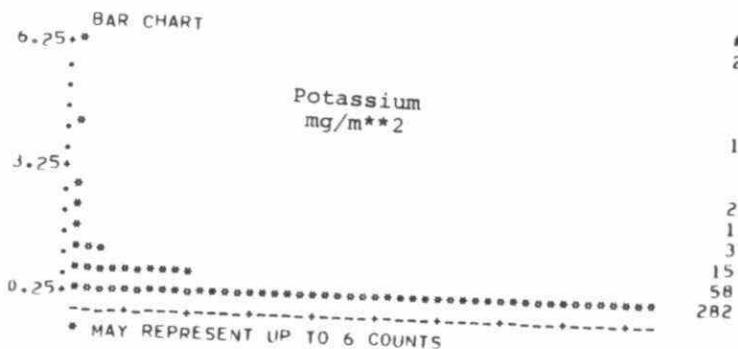
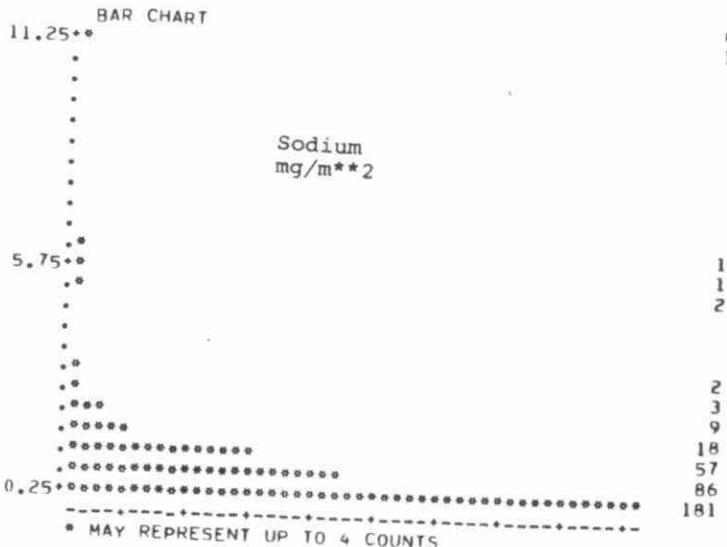
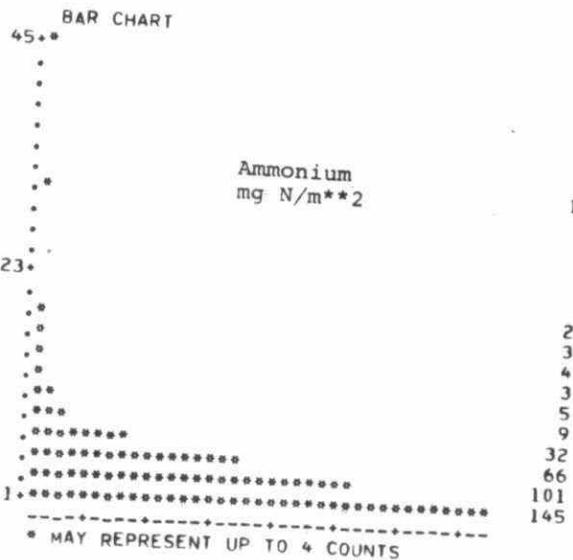
BAR/STEM-LEAF CHARTS OF OBSERVED DEPOSITION

SOUTHWESTERN REGION

BAR/STEM.LEAF CHARTS OF OBSERVED DEPOSITION
SOUTHWESTERN REGION



BAR/STEM.LEAF CHARTS OF OBSERVED DEPOSITION
SOUTHWESTERN REGION



PART V

SUMMARY STATISTICS OF OBSERVED CONCENTRATION BY STATION

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : BALSAM LAKE/DAILY PRECIPITATION #06

PERIOD OF REPORT : JAN 1,81 TO JAN 1,82

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	JMHO/CM					
# OF SAMPLES	: 116.0	67.0	54.00	104.00	69.0000	99.00	101.000
MAXIMUM	: 31.2	97.0	6.23	6.58	0.2520	14.50	3.400
MINIMUM	: 0.2	5.2	3.53	3.43	0.0322	0.20	0.050
RANGE	: 31.0	91.8	2.70	3.15	0.2198	14.30	3.350
ARITH. MEAN	: 6.4	31.3	4.26	4.36	0.0927	3.64	0.650
ARITH. STD. DEV.	: 6.7	19.3	0.40	0.52	0.0435	3.19	0.563
GEOM. MEAN	: 3.5	26.0	4.24	4.33	0.0841	2.49	0.461
GEOM. STD. DEV.	: 1.2	0.6	0.09	0.11	0.4406	0.94	0.878
1ST QUARTILE	: 1.4	16.8	4.08	4.07	0.0602	1.32	0.260
2ND QUARTILE	: 3.4	26.8	4.20	4.27	0.0840	2.45	0.515
3RD QUARTILE	: 8.2	39.3	4.35	4.53	0.1094	4.77	0.795
VOL. WGT. MEAN	: *****	29.5	*****	*****	0.0913	3.00	0.475

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : BALSAM LAKE/DAILY PRECIPITATION

#06

PERIOD OF REPORT : JAN 1,81 TO JAN 1,82

PAGE : 2

	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
# OF SAMPLES :	81.000	101.000	86.000	92.000	87.000	88.000	104.0000
MAXIMUM :	2.200	1.690	0.425	0.700	0.740	1.450	0.3715
MINIMUM :	0.010	0.005	0.002	0.005	0.005	0.004	0.0003
RANGE :	2.190	1.685	0.423	0.695	0.735	1.446	0.3713
ARITH. MEAN :	0.383	0.226	0.056	0.042	0.105	0.395	0.0698
ARITH. STD. DEV. :	0.491	0.251	0.078	0.092	0.142	0.362	0.0672
GEOM. MEAN :	0.171	0.121	0.021	0.020	0.050	0.227	0.0436
GEOM. STD. DEV. :	1.334	1.313	1.544	1.112	1.304	1.232	1.2060
1ST QUARTILE :	0.070	0.070	0.005	0.010	0.020	0.115	0.0292
2ND QUARTILE :	0.130	0.130	0.020	0.020	0.060	0.269	0.0531
3RD QUARTILE :	0.555	0.310	0.075	0.040	0.115	0.620	0.0851
VOL. WGT. MEAN :	0.246	0.182	0.039	0.040	0.067	0.320	0.0597

***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY PRECIPITATION #11

PERIOD OF REPORT : JAN 25.81 TO JAN 1.82

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	MMHO/CM					
# OF SAMPLES	: 168.0	87.0	64.00	129.00	88.0000	129.00	130.000
MAXIMUM	: 47.4	103.0	5.72	5.77	0.2516	16.20	8.900
MINIMUM	: 0.0	3.2	3.09	3.48	0.0276	0.15	0.010
RANGE	: 47.4	99.8	2.63	2.29	0.2240	16.05	8.890
ARITH. MEAN	: 6.0	33.8	4.16	4.31	0.0964	3.80	0.766
ARITH. STD. DEV	: 7.7	20.1	0.48	0.46	0.0513	2.90	0.939
GEOM. MEAN	: 2.4	28.0	4.13	4.29	0.0842	2.72	0.494
GEOM. STD. DEV.	: 1.6	0.7	0.12	0.10	0.5280	0.90	0.994
1ST QUARTILE	: 0.8	17.1	3.89	3.99	0.0611	1.40	0.280
2ND QUARTILE	: 2.6	31.2	4.19	4.24	0.0831	3.42	0.525
3RD QUARTILE	: 8.1	46.3	4.40	4.52	0.1281	5.10	0.995
VOL. WGT. MEAN	: *****	28.7	*****	*****	0.0876	2.77	0.453

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY PRECIPITATION #11

PERIOD OF REPORT : JAN 25,81 TO JAN 1,82

PAGE : 2

	CALCIUM	CHLORIDE	MAGNESIUM	POTASSIUM	SODIUM	AMMONIUM AS N	FREE H+ LAB
	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
# OF SAMPLES	: 105.000	128.000	104.000	109.000	103.000	120.000	129.0000
MAXIMUM	: 5.200	2.300	1.060	0.380	0.640	2.050	0.3311
MINIMUM	: 0.020	0.005	0.002	0.005	0.005	0.001	0.0017
RANGE	: 5.180	2.295	1.057	0.375	0.635	2.049	0.3294
ARITH. MEAN	: 0.354	0.254	0.067	0.038	0.136	0.420	0.0748
ARITH. STD. DEV.	: 0.619	0.319	0.129	0.050	0.156	0.379	0.0633
GEOM. MEAN	: 0.166	0.137	0.024	0.022	0.065	0.232	0.0488
GEOM. STD. DEV.	: 1.207	1.254	1.497	1.025	1.335	1.470	1.0707
1ST QUARTILE	: 0.070	0.080	0.008	0.010	0.020	0.147	0.0299
2ND QUARTILE	: 0.170	0.170	0.025	0.020	0.070	0.336	0.0556
3RD QUARTILE	: 0.305	0.315	0.062	0.040	0.195	0.560	0.1012
VOL. WGT. MEAN	: 0.179	0.155	0.031	0.027	0.102	0.303	0.0579

***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/DAILY PRECIPITATION

#08

PERIOD OF REPORT : JAN 1,81 TO JAN 1,82

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	JMHO/CM					
# OF SAMPLES	: 144.0	87.0	66.00	132.00	84.0000	132.00	133.000
MAXIMUM	: 48.2	195.0	4.77	5.37	0.5116	19.90	2.600
MINIMUM	: 0.1	5.5	3.24	3.37	0.0280	0.02	0.005
RANGE	: 48.1	189.5	1.53	2.00	0.4836	19.87	2.595
ARITH. MEAN	: 6.4	35.0	4.14	4.29	0.1013	3.23	0.625
ARITH. STD. DEV.	: 7.8	29.1 (8.2)	0.29	0.37	0.0703 69	3.06 98	0.550
GEOM. MEAN	: 3.3	27.4	4.13	4.27	0.0869	2.11	0.408
GEOM. STD. DEV.	: 1.3	0.7	0.07	0.09	0.5232	1.05	1.061
1ST QUARTILE	: 1.6	18.6	3.98	4.02	0.0638	1.25	0.250
2ND QUARTILE	: 3.4	25.1	4.15	4.28	0.0804	2.35	0.435
3RD QUARTILE	: 7.3	40.8	4.38	4.47	0.1171	4.00	0.855
VOL. WGT. MEAN	: *****	31.1	*****	*****	0.0960	3.03	0.464

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/DAILY PRECIPITATION

#08

PERIOD OF REPORT : JAN 1-81 TO JAN 1-82

PAGE : 2

	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
# OF SAMPLES	112.000	133.000	111.000	115.000	115.000	114.000	132.0000
MAXIMUM	2.000	2.100	0.355	0.590	1.650	2.150	0.4266
MINIMUM	0.005	0.005	0.002	0.005	0.005	0.001	0.0043
RANGE	1.995	2.095	0.353	0.585	1.645	2.149	0.4223
ARITH. MEAN	0.230	0.190	0.036	0.034	0.079	0.387	0.0719
ARITH. STD. DEV.	0.332	0.246	0.059	0.063	0.178	0.406	0.0626
GEOM. MEAN	0.107	0.108	0.015	0.018	0.035	0.181	0.0517
GEOM. STD. DEV.	1.294	1.173	1.359	1.061	1.176	1.645	0.8597
1ST QUARTILE	0.040	0.060	0.005	0.005	0.015	0.096	0.0339
2ND QUARTILE	0.110	0.130	0.015	0.020	0.030	0.240	0.0519
3RD QUARTILE	0.250	0.235	0.035	0.040	0.085	0.540	0.0955
VOL. WGT. MEAN	0.185	0.133	0.029	0.030	0.055	0.317	0.0628

***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : FERNBERG/DAILY PRECIPITATION

#16

PERIOD OF REPORT : OCT 1.81 TO DEC 31.81

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	UMHO/CM					
# OF SAMPLES	: 25.0	18.0	3.00	23.00	17.0000	23.00	23.000
MAXIMUM	: 14.0	26.5	5.16	5.52	0.0898	13.30	1.960
MINIMUM	: 0.1	4.7	4.37	3.90	0.0388	0.10	0.005
RANGE	: 13.9	21.8	0.79	1.62	0.0510	13.20	1.955
ARITH. MFAN	: 4.7	13.8	4.72	4.62	0.0629	1.51	0.342
ARITH. STD. DEV	: 4.1	7.5	0.40	0.42	0.0163	2.69	0.414
GEOM. MEAN	: 2.7	11.8	4.71	4.61	0.0608	0.80	0.188
GEOM. STD. DEV.	: 1.3	0.6	0.08	0.09	0.2662	1.05	1.285
1ST QUARTILE	: 1.1	6.2	*****	4.25	0.0498	0.38	0.110
2ND QUARTILE	: 3.6	13.0	*****	4.52	0.0588	0.80	0.205
3RD QUARTILE	: 5.9	19.7	*****	5.00	0.0751	1.22	0.410
VOL. WGT. MEAN	: *****	13.6	*****	*****	0.0629	0.87	0.298

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : FERNBERG/DAILY PRECIPITATION

#16

PERIOD OF REPORT : OCT 1,81 TO DEC 31,81

PAGE : 2

	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
# OF SAMPLES :	21.000	24.000	21.000	21.000	21.000	21.000	23.0000
MAXIMUM :	0.380	0.420	0.145	0.070	0.250	0.312	0.1259
MINIMUM :	0.005	0.005	0.002	0.005	0.005	0.001	0.0030
RANGE :	0.375	0.415	0.142	0.065	0.245	0.311	0.1229
ARITH. MEAN :	0.065	0.079	0.014	0.023	0.056	0.111	0.0347
ARITH. STD. DEV. :	0.080	0.111	0.031	0.017	0.066	0.099	0.0290
GEOM. MEAN :	0.038	0.038	0.006	0.017	0.031	0.054	0.0238
GEOM. STD. DEV. :	1.146	1.274	1.119	0.843	1.115	1.656	0.9623
1ST QUARTILE :	0.020	0.020	0.002	0.008	0.015	0.033	0.0098
2ND QUARTILE :	0.055	0.045	0.004	0.020	0.025	0.092	0.0254
3RD QUARTILE :	0.075	0.075	0.010	0.035	0.065	0.115	0.0497
VOL. WGT. MEAN :	0.070	0.040	0.012	0.021	0.051	0.109	0.0303

***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : FORBES TWSP/DAILY PRECIPITATION #13

PERIOD OF REPORT : SEP 23,81 TO DEC 31,81

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	JMHO/CM					
# OF SAMPLES	: 44.0	20.0	10.00	36.00	18.0000	31.00	31.000
MAXIMUM	: 18.9	74.5	5.20	5.98	0.0990	8.70	2.600
MINIMUM	: 0.1	3.6	3.81	3.56	0.0334	0.10	0.005
RANGE	: 18.8	70.9	1.39	2.42	0.0656	8.60	2.595
ARITH. MEAN	: 3.3	20.3	4.49	4.49	0.0630	1.83	0.438
ARITH. STD. DEV.	: 4.8	18.3	0.44	0.46	0.0232	2.28	0.547
GEOM. MEAN	: 1.2	15.0	4.47	4.47	0.0590	0.93	0.235
GEOM. STD. DEV.	: 1.5	0.8	0.10	0.10	0.3772	1.25	1.290
1ST QUARTILE	: 0.4	8.2	4.22	4.22	0.0415	0.40	0.130
2ND QUARTILE	: 1.3	13.9	4.37	4.47	0.0564	0.97	0.210
3RD QUARTILE	: 3.2	24.8	4.62	4.76	0.0857	1.90	0.545
VOL. WGT. MEAN	: *****	16.3	*****	*****	0.0620	1.54	0.264

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1) : PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : FORBES TWSP/DAILY PRECIPITATION #13

PERIOD OF REPORT : SEP 23,81 TO DEC 31,81

PAGE : 2

	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
# OF SAMPLES :	24.000	31.000	24.000	24.000	24.000	24.000	36.0000
MAXIMUM :	0.710	0.600	0.075	0.320	0.420	2.500	0.2754
MINIMUM :	0.010	0.005	0.002	0.005	0.005	0.004	0.0010
RANGE :	0.700	0.595	0.072	0.315	0.415	2.496	0.2744
ARITH. MEAN :	0.161	0.091	0.018	0.054	0.087	0.320	0.0509
ARITH. STD. DEV. :	0.183	0.127	0.021	0.084	0.102	0.531	0.0547
GEOM. MEAN :	0.088	0.034	0.009	0.023	0.041	0.131	0.0322
GEOM. STD. DEV. :	1.160	1.575	1.229	1.299	1.368	1.525	1.0556
1ST QUARTILE :	0.035	0.005	0.002	0.008	0.010	0.074	0.0174
2ND QUARTILE :	0.085	0.045	0.008	0.020	0.050	0.152	0.0339
3RD QUARTILE :	0.220	0.130	0.030	0.055	0.130	0.265	0.0612
VOL. WGT. MEAN :	0.093	0.057	0.010	0.031	0.077	0.167	0.0376

***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY PRECIPITATION #12

PERIOD OF REPORT : JAN 1,81 TO JAN 1,82				PAGE : 1			
	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H ⁺ TO PH8.3	SULPHATE	NITRATE AS N
	MM	UMHO/CM			MG/L	MG/L	MG/L
# OF SAMPLES	: 141.0	80.0	58.00	113.00	83.0000	120.00	122.000
MAXIMUM	: 38.0	88.5	6.05	6.82	0.2226	20.00	8.600
MINIMUM	: 0.1	3.4	3.25	3.40	0.0236	0.02	0.005
RANGE	: 37.9	85.1	2.80	3.42	0.1990	19.97	8.595
ARITH. MEAN	: 7.3	31.3	4.31	4.39	0.0836	3.73	0.736
ARITH. STD. DEV.	: 7.6	19.5	0.50	0.57	0.0445	2.95	0.884
GEOM. MEAN	: 4.1	24.8	4.28	4.35	0.0731	2.63	0.452
GEOM. STD. DEV.	: 1.2	0.7	0.11	0.12	0.5262	0.98	1.140
1ST QUARTILE	: 2.1	15.3	3.98	4.03	0.0489	1.55	0.270
2ND QUARTILE	: 4.8	25.6	4.30	4.27	0.0729	3.32	0.505
3RD QUARTILE	: 9.6	43.6	4.55	4.58	0.1048	5.13	0.980
VOL. WGT. MEAN	: *****	28.4	*****	*****	0.0799	2.96	0.554

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY PRECIPITATION

#12

PERIOD OF REPORT : JAN 1-81 TO JAN 1-82

PAGE : 2

	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
# OF SAMPLES	96.000	119.000	86.000	102.000	99.000	109.000	113.0000
MAXIMUM	6.600	1.350	1.400	0.800	0.890	1.530	0.3981
MINIMUM	0.005	0.020	0.002	0.005	0.005	0.004	0.0002
RANGE	6.595	1.330	1.397	0.795	0.885	1.526	0.3980
ARITH. MEAN	0.496	0.276	0.087	0.066	0.142	0.439	0.0677
ARITH. STD. DEV.	0.827	0.237	0.175	0.105	0.183	0.362	0.0620
GEOM. MEAN	0.230	0.191	0.031	0.035	0.080	0.275	0.0411
GEOM. STD. DEV.	1.278	0.924	1.520	1.099	1.092	1.183	1.3068
1ST QUARTILE	0.095	0.115	0.010	0.020	0.040	0.161	0.0257
2ND QUARTILE	0.220	0.210	0.032	0.040	0.080	0.370	0.0531
3RD QUARTILE	0.605	0.360	0.082	0.070	0.150	0.595	0.0912
VOL. WGT. MEAN	0.342	0.188	0.057	0.044	0.093	0.346	0.0589

***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : LAC LA CROIX/DAILY PRECIPITATION #15

PERIOD OF REPORT : SEP 23,81 TO DEC 12,81

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	UMHO/CM					
# OF SAMPLES	:	9.0	4.0	1.00	9.00	4.0000	7.00
MAXIMUM	:	13.1	31.2	4.55	5.06	0.1070	7.60
MINIMUM	:	0.3	6.2	4.55	4.14	0.0356	0.35
RANGE	:	12.8	25.0	0.00	0.92	0.0714	7.25
ARITH. MEAN	:	4.4	18.5	*****	4.47	0.0751	2.27
ARITH. STD. DEV.	:	4.6	11.6	*****	0.31	0.0309	2.62
GEOM. MEAN	:	2.3	15.4	*****	4.46	0.0695	1.28
GEOM. STD. DEV.	:	1.3	0.7	*****	0.07	0.4843	1.18
1ST QUARTILE	:	0.8	8.9	*****	4.21	0.0516	0.35
2ND QUARTILE	:	1.6	18.2	*****	4.35	0.0790	0.88
3RD QUARTILE	:	5.6	28.0	*****	4.53	0.0987	2.93
VOL. WGT. MEAN	:	*****	16.9	*****	*****	0.0697	1.31
							0.433

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP.: VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : LAC LA CROIX/DAILY PRECIPITATION #15

PERIOD OF REPORT : SEP 23,81 TO DEC 12,81

PAGE : 2

	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
# OF SAMPLES :	5.000	7.000	5.000	5.000	5.000	7.000	9.0000
MAXIMUM :	0.270	0.520	0.015	0.060	0.120	1.000	0.0724
MINIMUM :	0.020	0.020	0.002	0.010	0.010	0.050	0.0087
RANGE :	0.250	0.500	0.012	0.050	0.110	0.950	0.0637
ARITH. MEAN :	0.132	0.150	0.008	0.032	0.076	0.345	0.0409
ARITH. STD. DEV. :	0.108	0.170	0.005	0.023	0.052	0.351	0.0221
GEOM. MEAN :	0.092	0.095	0.007	0.025	0.053	0.201	0.0340
GEOM. STD. DEV. :	1.053	1.035	0.708	0.860	1.100	1.183	0.7157
1ST QUARTILE :	0.040	0.030	0.004	0.010	0.020	0.055	0.0194
2ND QUARTILE :	0.075	0.090	0.008	0.020	0.070	0.146	0.0390
3RD QUARTILE :	0.155	0.145	0.010	0.040	0.110	0.505	0.0542
VOL. WGT. MEAN :	0.132	0.075	0.008	0.043	0.061	0.244	0.0336

***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGWOODS/DAILY PRECIPITATION

#02

PERIOD OF REPORT : DEC 31,80 TO JAN 1,82

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	JMHO/CM					
# OF SAMPLES	125.0	75.0	30.00	87.00	72.0000	110.00	110.000
MAXIMUM	53.0	120.0	5.95	6.03	0.2900	23.00	5.600
MINIMUM	0.1	3.9	3.53	3.23	0.0266	0.20	0.020
RANGE	52.9	116.1	2.42	2.80	0.2634	22.80	5.580
ARITH. MEAN	7.3	34.1	4.35	4.33	0.0843	4.25	0.802
ARITH. STD. DEV.	8.3	23.6	0.53	0.52	0.0503	3.49	0.767
GEOM. MEAN	3.8	27.3	4.32	4.30	0.0722	3.06	0.540
GEOM. STD. DEV.	1.3	0.7	0.11	0.12	0.5608	0.87	0.981
1ST QUARTILE	1.6	17.7	4.01	4.02	0.0454	1.95	0.305
2ND QUARTILE	4.1	27.5	4.16	4.26	0.0754	3.07	0.585
3RD QUARTILE	9.4	42.8	4.52	4.53	0.1144	5.40	1.035
VOL. WGT. MEAN	*****	32.3	*****	*****	0.0884	3.56	0.565

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGWOODS/DAILY PRECIPITATION

#02

PERIOD OF REPORT : DEC 31, 80 TO JAN 1, 82

PAGE : 2

	CALCIUM	CHLORIDE	MAGNESIUM	POTASSIUM	SODIUM	AMMONIUM AS N	FREE H+ LAB
	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
# OF SAMPLES :	81.000	104.000	86.000	97.000	97.000	100.000	87.0000
MAXIMUM :	3.400	2.350	0.550	1.060	2.100	4.400	0.5888
MINIMUM :	0.030	0.005	0.002	0.005	0.005	0.036	0.0009
RANGE :	3.370	2.345	0.548	1.055	2.095	4.364	0.5879
ARITH. MEAN :	0.537	0.325	0.094	0.084	0.170	0.556	0.0799
ARITH. STD. DEV. :	0.596	0.370	0.098	0.142	0.253	0.553	0.0903
GEOM. MEAN :	0.344	0.201	0.057	0.048	0.095	0.383	0.0466
GEOM. STD. DEV. :	0.954	1.071	1.129	0.977	1.086	0.913	1.1919
1ST QUARTILE :	0.205	0.120	0.027	0.025	0.050	0.223	0.0282
2ND QUARTILE :	0.345	0.220	0.062	0.040	0.090	0.405	0.0531
3RD QUARTILE :	0.620	0.360	0.127	0.090	0.195	0.725	0.0933
VOL. WGT. MEAN :	0.401	0.195	0.062	0.048	0.097	0.440	0.0640

***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : MELBOURNE/DAILY PRECIPITATION

#01

PERIOD OF REPORT : JAN 3,81 TO JAN 1,82

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N
	MM	JMHO/CM			MG/L	MG/L	MG/L
# OF SAMPLES	120.0	65.0	33.00	99.00	64.0000	101.00	101.000
MAXIMUM	45.2	90.0	5.85	5.98	0.2234	30.00	5.400
MINIMUM	0.1	3.9	3.77	3.08	0.0228	0.45	0.005
RANGE	45.1	86.1	2.08	2.90	0.2006	29.55	5.395
ARITH. MEAN	6.7	33.3	4.42	4.23	0.0940	4.75	0.880
ARITH. STD. DEV.	7.6	17.7	0.52	0.48	0.0408	4.23	0.876
GEOM. MEAN	3.7	27.9	4.39	4.21	0.0851	3.53	0.583
GEOM. STD. DEV.	1.2	0.7	0.11	0.11	0.4657	0.79	1.034
1ST QUARTILE	1.6	19.7	4.08	3.98	0.0646	2.20	0.385
2ND QUARTILE	3.9	31.7	4.22	4.18	0.0916	3.75	0.615
3RD QUARTILE	8.8	44.8	4.63	4.41	0.1161	5.80	1.070
VOL. WGT. MEAN	*****	29.9	*****	*****	0.0899	3.34	0.545

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : MELBOURNE/DAILY PRECIPITATION

#01

PERIOD OF REPORT : JAN 3,81 TO JAN 1,82

PAGE : 2

	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
# OF SAMPLES	83.000	100.000	86.000	86.000	79.000	84.000	99.0000
MAXIMUM	2.700	2.100	0.565	0.920	0.790	1.890	0.8318
MINIMUM	0.040	0.005	0.002	0.005	0.010	0.034	0.0010
RANGE	2.660	2.095	0.563	0.915	0.780	1.856	0.8307
ARITH. MEAN	0.424	0.370	0.083	0.077	0.159	0.562	0.0944
ARITH. STD. DEV.	0.508	0.368	0.107	0.114	0.137	0.431	0.1110
GEOM. MEAN	0.254	0.232	0.040	0.043	0.110	0.418	0.0588
GEOM. STD. DEV.	1.006	1.135	1.346	1.063	0.906	0.818	1.1018
1ST QUARTILE	0.125	0.140	0.020	0.020	0.060	0.220	0.0376
2ND QUARTILE	0.225	0.265	0.040	0.040	0.120	0.450	0.0631
3RD QUARTILE	0.490	0.480	0.095	0.090	0.240	0.720	0.1023
VOL. WGT. MEAN	0.272	0.197	0.049	0.062	0.110	0.445	0.0669

***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : NITHGROVE/DAILY PRECIPITATION

#07

PERIOD OF REPORT : JAN 26.81 TO JAN 1.82

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H ⁺ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	MMHO/CM					
# OF SAMPLES	:	128.0	80.0	58.00	115.00	79.0000	118.00
MAXIMUM	:	40.6	129.5	5.63	6.57	0.3114	13.20
MINIMUM	:	0.2	7.2	3.50	3.47	0.0228	0.20
RANGE	:	40.4	122.3	2.13	3.10	0.2886	0.005
ARITH. MEAN	:	6.9	34.5	4.22	4.37	0.0979	3.495
ARITH. STD. DEV	:	8.0	24.7	0.37	0.49	0.0570	0.663
GEOM. MEAN	:	3.7	27.7	4.21	4.35	0.0846	0.630
GEOM. STD. DEV.	:	1.2	0.7	0.09	0.11	0.5406	0.439
1ST QUARTILE	:	1.6	15.8	3.98	4.05	0.0573	1.019
2ND QUARTILE	:	4.0	27.3	4.18	4.30	0.0833	0.250
3RD QUARTILE	:	8.9	43.1	4.44	4.61	0.1241	0.475
VOL. WGT. MEAN	:	*****	30.6	*****	*****	0.0911	0.745
							0.455

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : NITHGROVE/DAILY PRECIPITATION

#07

PERIOD OF REPORT : JAN 26,81 TO JAN 1,82

PAGE : 2

	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
# OF SAMPLES :	93.000	117.000	92.000	88.000	97.000	92.000	115.0000
MAXIMUM :	3.800	1.800	0.575	0.320	1.170	1.800	0.3388
MINIMUM :	0.020	0.005	0.002	0.005	0.010	0.001	0.0003
RANGE :	3.780	1.795	0.572	0.315	1.160	1.799	0.3386
ARITH. MEAN :	0.374 1.32	0.241 1.12	0.056 1.46	0.064 1.49	0.103 1.47	0.445 1.40	0.0667 1.41
ARITH. STD. DEV. :	0.502	0.270	0.082	0.057	0.151	0.400	0.0608
GEOM. MEAN :	0.212	0.146	0.026	0.045	0.062	0.271	0.0426
GEOM. STD. DEV. :	1.100	1.116	1.252	0.871	0.951	1.213	1.1325
1ST QUARTILE :	0.100	0.080	0.010	0.030	0.030	0.128	0.0243
2ND QUARTILE :	0.200	0.170	0.020	0.050	0.060	0.331	0.0501
3RD QUARTILE :	0.460	0.285	0.072	0.090	0.105	0.670	0.0851
VOL. WGT. MEAN :	0.238	0.141	0.035	0.041	0.065	0.357	0.0594

**** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY PRECIPITATION #03

PERIOD OF REPORT : JAN 1,81 TO JAN 1,82

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	JMH0/CM					
# OF SAMPLES	: 185.0	74.0	34.00	114.00	71.0000	140.00	143.000
MAXIMUM	: 60.5	137.0	6.99	6.80	0.3396	28.50	6.000
MINIMUM	: 0.0	5.6	3.78	3.44	0.0220	0.20	0.005
RANGE	: 60.5	131.4	3.21	3.36	0.3176	28.30	5.995
ARITH. MEAN	: 5.0	39.2	4.42	4.34	0.0922	4.70	0.833
ARITH. STD. DEV.	: 7.8	28.5	0.60	0.55	0.0631	4.29	0.862
GEOM. MEAN	: 1.8	30.8	4.39	4.31	0.0777	3.17	0.514
GEOM. STD. DEV.	: 1.6	0.7	0.12	0.12	0.5636	0.94	1.139
1ST QUARTILE	: 0.6	19.1	4.15	3.97	0.0572	1.75	0.280
2ND QUARTILE	: 1.8	28.1	4.30	4.31	0.0713	3.05	0.600
3RD QUARTILE	: 6.2	49.1	4.47	4.55	0.0942	6.85	1.160
VOL. WGT. MEAN	: *****	36.9	*****	*****	0.0966	3.79	0.503

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY PRECIPITATION #03

PERIOD OF REPORT	JAN 1,81	TO	JAN 1,82			PAGE	2	
	CALCIUM		CHLORIDE	MAGNESIUM	POTASSIUM	SODIUM	AMMONIUM AS N	FREE H+ LAB
	MG/L		MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
# OF SAMPLES	: 88.000		142.000	90.000	98.000	101.000	105.000	114.0000
MAXIMUM	: 1.410		6.300	0.275	0.380	0.970	4.350	0.3631
MINIMUM	: 0.030		0.005	0.002	0.005	0.005	0.001	0.0002
RANGE	: 1.380		6.295	0.272	0.375	0.965	4.349	0.3629
ARITH. MEAN	: 0.388	87	0.417	0.076	0.054	0.125	0.648	0.0759
ARITH. STD. DEV.	: 0.337		0.664	0.069	0.061	0.167	0.672	0.0705
GEOM. MEAN	: 0.254		0.217	0.045	0.034	0.069	0.402	0.0453
GEOM. STD. DEV.	: 0.997		1.241	1.169	0.990	1.081	1.249	1.2669
1ST QUARTILE	: 0.130		0.120	0.022	0.020	0.030	0.268	0.0275
2ND QUARTILE	: 0.270		0.240	0.052	0.040	0.070	0.495	0.0495
3RD QUARTILE	: 0.575		0.440	0.115	0.065	0.140	0.780	0.1072
VOL. WGT. MEAN	: 0.277		0.198	0.053	0.034	0.071	0.424	0.0683

***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAILTON/DAILY PRECIPITATION

#10

PERIOD OF REPORT : JAN 6.81 TO JAN 1.82

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N
	MM	UMHO/CM			MG/L	MG/L	MG/L
# OF SAMPLES	: 117.0	66.0	48.00	99.00	66.0000	103.00	103.000
MAXIMUM	: 55.0	84.0	4.84	6.76	0.3068	22.00	6.000
MINIMUM	: 0.2	4.7	3.18	3.32	0.0244	0.35	0.050
RANGE	: 54.8	79.3	1.66	3.44	0.2824	21.65	5.950
ARITH. MEAN	: 8.5	34.3	4.04	4.28	0.0965	4.21	0.791
ARITH. STD. DEV	: 10.5	16.3	0.40	0.53	0.0498	3.35	0.754
GEOM. MEAN	: 4.0	29.8	4.03	4.25	0.0854	3.13	0.564
GEOM. STD. DEV.	: 1.3	0.6	0.10	0.11	0.5086	0.83	0.858
1ST QUARTILE	: 1.7	22.1	3.79	3.95	0.0581	2.17	0.325
2ND QUARTILE	: 4.0	34.0	4.11	4.17	0.0881	3.50	0.615
3RD QUARTILE	: 12.1	46.1	4.34	4.46	0.1196	5.07	1.030
VOL. WGT. MEAN	: *****	29.3	*****	*****	0.0831	3.10	0.502

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAILTON/DAILY PRECIPITATION

#10

PERIOD OF REPORT : JAN 6.81 TO JAN 1.82

PAGE : 2

	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
# OF SAMPLES :	80.000	101.000	80.000	87.000	79.000	90.000	99.0000
MAXIMUM :	5.800	2.100	0.640	0.240	0.890	1.830	0.4786
MINIMUM :	0.020	0.020	0.002	0.005	0.005	0.006	0.0002
RANGE :	5.780	2.080	0.637	0.235	0.885	1.824	0.4785
ARITH. MEAN :	0.552	0.364	0.070	0.058	0.186	0.484	0.0834
ARITH. STD. DEV. :	0.766	0.330	0.094	0.047	0.188	0.391	0.0725
GEOM. MEAN :	0.293	0.256	0.033	0.041	0.113	0.340	0.0530
GEOM. STD. DEV. :	1.168	0.883	1.358	0.896	1.099	0.948	1.2287
1ST QUARTILE :	0.120	0.145	0.015	0.025	0.055	0.194	0.0339
2ND QUARTILE :	0.310	0.265	0.035	0.040	0.120	0.380	0.0631
3RD QUARTILE :	0.735	0.475	0.098	0.080	0.250	0.690	0.1096
VOL. WGT. MEAN :	0.331	0.205	0.043	0.041	0.111	0.365	0.0580

***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY PRECIPITATION #05

PERIOD OF REPORT : FEB 1,81 TO JAN 1,82

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	MMHO/CM					
# OF SAMPLES	: 122.0	71.0	56.00	104.00	65.0000	112.00	110.000
MAXIMUM	: 37.2	84.5	6.20	6.60	0.2224	15.50	2.900
MINIMUM	: 0.2	5.3	3.63	3.52	0.0226	0.25	0.040
RANGE	: 37.0	79.2	2.57	3.08	0.1998	15.25	2.860
ARITH. MEAN	: 6.5	32.6	4.23	4.33	0.0910	3.80	0.668
ARITH. STD. DEV	: 7.1	18.8	0.37	0.52	0.0462	2.96	0.549
GEOM. MEAN	: 3.6	27.5	4.21	4.30	0.0799	2.82	0.479
GEOM. STD. DEV.	: 1.2	0.6	0.08	0.11	0.5318	0.83	0.878
1ST QUARTILE	: 1.6	19.3	4.04	4.02	0.0571	1.72	0.275
2ND QUARTILE	: 3.6	28.8	4.18	4.26	0.0809	3.27	0.520
3RD QUARTILE	: 9.0	40.3	4.35	4.45	0.1102	5.00	0.820
VOL. WGT. MEAN	: *****	31.3	*****	*****	0.0929	3.27	0.494

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY PRECIPITATION

#05

PERIOD OF REPORT : FEB 1,81 TO JAN 1,82

PAGE : 2

	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
# OF SAMPLES :	80.000	103.000	85.000	88.000	84.000	92.000	104.0000
MAXIMUM :	3.200	2.200	0.525	0.270	1.800	1.820	0.3020
MINIMUM :	0.020	0.005	0.002	0.005	0.010	0.002	0.0003
RANGE :	3.180	2.195	0.522	0.265	1.790	1.818	0.3017
ARITH. MEAN :	0.453	0.318	0.058	0.044	0.170	0.442	0.0722
ARITH. STD. DEV. :	0.606	0.324	0.079	0.048	0.241	0.384	0.0614
GEOM. MEAN :	0.221	0.209	0.025	0.027	0.101	0.267	0.0471
GEOM. STD. DEV. :	1.257	0.989	1.412	0.978	1.006	1.258	1.2088
1ST QUARTILE :	0.085	0.120	0.010	0.010	0.060	0.141	0.0355
2ND QUARTILE :	0.225	0.200	0.025	0.030	0.100	0.323	0.0544
3RD QUARTILE :	0.600	0.400	0.085	0.050	0.185	0.665	0.0944
VOL. WGT. MEAN :	0.266	0.191	0.036	0.029	0.106	0.365	0.0620

**** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/DAILY PRECIPITATION #14

PERIOD OF REPORT : OCT 16.81 TO DEC 31.81

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	JMHO/CM					
# OF SAMPLES	: 29.0	15.0	4.00	26.00	10.0000	25.00	25.000
MAXIMUM	: 12.0	119.0	5.00	5.18	0.0976	14.00	3.570
MINIMUM	: 0.1	6.1	4.35	3.82	0.0450	0.15	0.080
RANGE	: 11.9	112.9	0.65	1.36	0.0526	13.85	3.490
ARITH. MEAN	: 2.4	22.9	4.70	4.63	0.0655	1.40	0.510
ARITH. STD. DEV	: 2.8	27.6	0.31	0.33	0.0179	2.70	0.684
GEOM. MEAN	: 1.4	16.6	4.69	4.62	0.0634	0.73	0.339
GEOM. STD. DEV.	: 1.1	0.7	0.07	0.07	0.2668	1.03	0.843
1ST QUARTILE	: 0.7	9.8	4.44	4.33	0.0488	0.30	0.215
2ND QUARTILE	: 1.1	14.1	4.73	4.65	0.0611	0.75	0.310
3RD QUARTILE	: 3.4	22.8	4.96	4.85	0.0770	1.55	0.545
VOL. WGT. MEAN	: *****	16.6	*****	*****	0.0638	0.87	0.427

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/DAILY PRECIPITATION #14

PERIOD OF REPORT : OCT 16,81 TO DEC 31,81 PAGE : 2

	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
# OF SAMPLES :	19.000	25.000	19.000	19.000	19.000	15.000	26.0000
MAXIMUM :	1.450	0.320	0.155	0.180	0.250	0.910	0.1514
MINIMUM :	0.005	0.005	0.002	0.005	0.010	0.006	0.0066
RANGE :	1.445	0.315	0.152	0.175	0.240	0.904	0.1447
ARITH. MEAN :	0.171	0.108	0.015	0.036	0.065	0.274	0.0315
ARITH. STD. DEV. :	0.323	0.080	0.035	0.048	0.067	0.224	0.0297
GEOM. MEAN :	0.076	0.076	0.006	0.021	0.041	0.167	0.0234
GEOM. STD. DEV. :	1.249	1.029	1.167	0.979	0.992	1.339	0.7619
1ST QUARTILE :	0.035	0.040	0.002	0.010	0.020	0.098	0.0129
2ND QUARTILE :	0.055	0.085	0.002	0.020	0.035	0.254	0.0224
3RD QUARTILE :	0.165	0.140	0.010	0.030	0.085	0.327	0.0403
VOL. WGT. MEAN :	0.097	0.062	0.009	0.020	0.039	0.230	0.0303

***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : WELLESLEY/DAILY PRECIPITATION #04

PERIOD OF REPORT : JAN 27.81 TO JAN 1.82

PAGE : 1

	PRECIP. MM	CONDUCT. JMH0/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
# OF SAMPLES	: 129.0	62.0	31.00	90.00	62.0000	108.00	110.000
MAXIMUM	: 57.2	124.0	5.66	6.35	0.3092	17.00	3.000
MINIMUM	: 0.1	4.8	3.79	3.56	0.0270	0.20	0.010
RANGE	: 57.1	119.2	1.87	2.79	0.2822	16.80	2.990
ARITH. MEAN	: 6.6	36.8	4.34	4.32	0.0949	4.56	0.822
ARITH. STD. DEV.	: 9.1	25.5	0.37	0.44	0.0581	3.28	0.612
GEOM. MEAN	: 2.9	30.0	4.33	4.30	0.0818	3.49	0.611
GEOM. STD. DEV.	: 1.4	0.7	0.08	0.10	0.5358	0.79	0.868
1ST QUARTILE	: 1.0	20.3	4.10	4.04	0.0540	2.15	0.365
2ND QUARTILE	: 3.2	27.6	4.27	4.24	0.0807	3.63	0.700
3RD QUARTILE	: 8.2	44.5	4.55	4.46	0.1063	6.22	1.065
VOL. WGT. MEAN	: *****	31.9	*****	*****	0.0907	3.37	0.483

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : WELLESLEY/DAILY PRECIPITATION

#04

PERIOD OF REPORT : JAN 27,81 TO JAN 1,82

PAGE : 2

	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
# OF SAMPLES	78.000	105.000	74.000	83.000	84.000	83.000	90.0000
MAXIMUM	1.710	2.050	0.365	0.240	0.630	5.650	0.2754
MINIMUM	0.030	0.005	0.002	0.005	0.005	0.046	0.0004
RANGE	1.680	2.045	0.363	0.235	0.625	5.604	0.2750
ARITH. MEAN	0.397	0.317	0.081	0.036	0.103	0.690	0.0689
ARITH. STD. DEV.	0.367	0.344	0.085	0.040	0.127	0.747	0.0552
GEOM. MEAN	0.245	0.170	0.043	0.024	0.053	0.483	0.0483
GEOM. STD. DEV.	1.051	1.319	1.245	0.923	1.207	0.856	1.0116
1ST QUARTILE	0.095	0.100	0.020	0.010	0.020	0.289	0.0331
2ND QUARTILE	0.250	0.200	0.042	0.020	0.050	0.520	0.0569
3RD QUARTILE	0.610	0.325	0.120	0.040	0.120	0.820	0.0891
VOL. WGT. MEAN	0.248	0.138	0.052	0.022	0.051	0.413	0.0639

**** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : WHITMAN CREEK/DAILY PRECIPITATION #09

PERIOD OF REPORT : JAN 6,81 TO JAN 1,82

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	MMHO/CM					
# OF SAMPLES	: 110.0	67.0	56.00	91.00	63.0000	86.00	90.000
MAXIMUM	: 51.0	156.0	5.03	6.65	0.2870	17.20	5.600
MINIMUM	: 0.1	7.2	3.14	3.62	0.0244	0.35	0.100
RANGE	: 50.9	148.8	1.89	3.03	0.2626	16.85	5.500
ARITH. MEAN	: 8.9	37.3	4.08	4.33	0.0964	4.13	0.807
ARITH. STD. DEV	: 10.9	25.7	0.41	0.50	0.0449	2.99	0.807
GEOM. MEAN	: 4.2	30.5	4.06	4.30	0.0872	3.20	0.572
GEOM. STD. DEV.	: 1.3	0.7	0.10	0.10	0.4591	0.76	0.819
1ST QUARTILE	: 1.4	19.5	3.81	4.02	0.0652	2.13	0.320
2ND QUARTILE	: 4.8	32.1	4.17	4.26	0.0905	3.40	0.540
3RD QUARTILE	: 12.2	44.6	4.34	4.52	0.1182	5.35	1.045
VOL. WGT. MEAN	: *****	32.6	*****	*****	0.0960	3.59	0.510

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : WHITMAN CREEK/DAILY PRECIPITATION #09

PERIOD OF REPORT : JAN 6.81 TO JAN 1.82 PAGE : 2

	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
# OF SAMPLES :	74.000	82.000	71.000	80.000	73.000	86.000	91.0000
MAXIMUM :	4.600	2.200	0.695	0.560	0.820	2.400	0.2399
MINIMUM :	0.010	0.005	0.002	0.005	0.010	0.001	0.0002
RANGE :	4.590	2.195	0.692	0.555	0.810	2.399	0.2397
ARITH. MEAN :	0.522	0.273	0.076	0.073	0.120	0.503	0.0689
ARITH. STD. DEV. :	0.787	0.312	0.113	0.107	0.151	0.463	0.0505
GEOM. MEAN :	0.245	0.187	0.034	0.037	0.069	0.320	0.0470
GEOM. STD. DEV. :	1.280	0.875	1.335	1.142	1.053	1.156	1.1459
1ST QUARTILE :	0.110	0.110	0.010	0.020	0.030	0.184	0.0302
2ND QUARTILE :	0.265	0.170	0.032	0.040	0.075	0.385	0.0543
3RD QUARTILE :	0.590	0.300	0.085	0.080	0.140	0.580	0.0933
VOL. WGT. MEAN :	0.309	0.208	0.052	0.040	0.093	0.354	0.0640

***** : INSUFFICIENT DATA OR NOT APPLICABLE

PART VI

SUMMARY STATISTICS OF OBSERVED CONCENTRATION BY REGION

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : CENTRAL REGION/DAILY PRECIPITATION

PERIOD OF REPORT : JAN 1,81 TO JAN 1,82

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	JMHO/CM					
# OF SAMPLES	: 510.0	305.0	234.00	455.00	297.0000	461.00	462.000
MAXIMUM	: 48.2	195.0	6.23	6.60	0.5116	19.90	3.500
MINIMUM	: 0.1	5.2	3.24	3.37	0.0226	0.02	0.005
RANGE	: 48.1	189.8	2.99	3.23	0.4890	19.87	3.495
ARITH. MEAN	: 6.6	33.5	4.21	4.33	0.0961	3.50	0.651
ARITH. STD. DEV	: 7.4	23.7	0.36	0.48	0.0562	2.95	0.573
GEOM. MEAN	: 3.5	27.2	4.20	4.31	0.0841	2.46	0.444
GEOM. STD. DEV.	: 1.2	0.7	0.08	0.10	0.5103	0.92	0.969
1ST QUARTILE	: 1.6	17.8	4.02	4.05	0.0592	1.47	0.260
2ND QUARTILE	: 3.8	27.1	4.18	4.29	0.0831	2.67	0.500
3RD QUARTILE	: 8.0	41.7	4.36	4.52	0.1164	4.52	0.810
VOL. WGT. MEAN	: *****	30.6	*****	*****	0.0929	3.09	0.471

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : CENTRAL REGION/DAILY PRECIPITATION

PERIOD OF REPORT	JAN 1,81	TO	JAN 1,82			PAGE : 2			
	CALCIUM		CHLORIDE	MAGNESIUM	POTASSIUM	SODIUM	AMMONIUM AS N	FREE H+ LAB	
	MG/L		MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	
# OF SAMPLES	:	366.000		454.000	374.000	383.000	383.000	386.000	455.0000
MAXIMUM	:	3.800		2.200	0.575	0.700	1.800	2.150	0.4266
MINIMUM	:	0.005		0.005	0.002	0.005	0.005	0.001	0.0003
RANGE	:	3.795		2.195	0.572	0.695	1.795	2.149	0.4263
ARITH. MEAN	:	0.350	1.39	0.240	0.051	0.045	0.111	0.416	0.0702
ARITH. STD. DEV	:	0.486		0.276	0.075	0.068	0.183	0.389	0.0628
GEOM. MEAN	:	0.165		0.139	0.021	0.025	0.055	0.230	0.0463
GEOM. STD. DEV.	:	1.280		1.176	1.407	1.073	1.178	1.374	1.0968
1ST QUARTILE	:	0.070		0.080	0.005	0.010	0.030	0.121	0.0302
2ND QUARTILE	:	0.160		0.160	0.020	0.030	0.060	0.308	0.0513
3RD QUARTILE	:	0.455		0.300	0.070	0.050	0.120	0.630	0.0891
VOL. WGT. MEAN	:	0.231		0.159	0.034	0.035	0.072	0.339	0.0611

***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : SEP 23,81 TO DEC 31,81

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H ⁺ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	MMHO/CM					
# OF SAMPLES	: 107.0	57.0	18.00	94.00	49.0000	86.00	86.000
MAXIMUM	: 18.9	119.0	5.20	5.98	0.1070	14.00	3.570
MINIMUM	: 0.1	3.6	3.81	3.56	0.0334	0.10	0.005
RANGE	: 18.8	115.4	1.39	2.42	0.0736	13.90	3.565
ARITH. MEAN	: 3.5	18.8	4.58	4.56	0.0645	1.66	0.435
ARITH. STD. DEV.	: 4.2	18.5	0.39	0.40	0.0203	2.51	0.540
GEOM. MEAN	: 1.6	14.3	4.56	4.54	0.0613	0.85	0.254
GEOM. STD. DEV.	: 1.4	0.7	0.08	0.09	0.3227	1.12	1.154
1ST QUARTILE	: 0.6	8.1	4.32	4.27	0.0488	0.38	0.130
2ND QUARTILE	: 1.6	13.7	4.47	4.49	0.0611	0.85	0.270
3RD QUARTILE	: 4.3	23.0	4.88	4.81	0.0814	1.75	0.545
VOL. WGT. MEAN	: *****	15.5	*****	*****	0.0635	1.17	0.326

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : SEP 23,81 TO DEC 31,81

PAGE : 2

	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
# OF SAMPLES	: 69.000	87.000	69.000	69.000	69.000	67.000	94.0000
MAXIMUM	: 1.450	0.600	0.155	0.320	0.420	2.500	0.2754
MINIMUM	: 0.005	0.005	0.002	0.005	0.005	0.001	0.0010
RANGE	: 1.445	0.595	0.152	0.315	0.415	2.499	0.2744
ARITH. MEAN	: 0.133	0.097	0.015	0.038	0.071	0.247	0.0406
ARITH. STD. DEV.	: 0.209	0.115	0.028	0.057	0.080	0.363	0.0410
GEOM. MEAN	: 0.066	0.048	0.007	0.021	0.039	0.110	0.0275
GEOM. STD. DEV.	: 1.207	1.350	1.142	1.046	1.164	1.548	0.9299
1ST QUARTILE	: 0.030	0.020	0.002	0.010	0.020	0.057	0.0150
2ND QUARTILE	: 0.060	0.060	0.005	0.020	0.035	0.146	0.0320
3RD QUARTILE	: 0.140	0.130	0.012	0.040	0.100	0.265	0.0519
VOL. WGT. MEAN	: 0.090	0.055	0.010	0.027	0.060	0.166	0.0334

**** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTHEASTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : JAN 1,81 TO JAN 1,82

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H ⁺ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	MMHO/CM					
# OF SAMPLES	: 536.0	300.0	226.00	432.00	300.0000	438.00	445.000
MAXIMUM	: 55.0	156.0	6.05	6.82	0.3068	22.00	8.900
MINIMUM	: 0.0	3.2	3.09	3.32	0.0236	0.02	0.005
RANGE	: 55.0	152.8	2.96	3.50	0.2832	21.97	8.895
ARITH. MEAN	: 7.5	34.0	4.15	4.33	0.0929	3.94	0.772
ARITH. STD. DEV	: 9.1	20.6	0.46	0.52	0.0479	3.04	0.855
GEOM. MEAN	: 3.5	28.0	4.13	4.30	0.0818	2.88	0.512
GEOM. STD. DEV.	: 1.4	0.7	0.11	0.11	0.5119	0.88	0.977
1ST QUARTILE	: 1.4	18.4	3.89	4.00	0.0582	1.75	0.305
2ND QUARTILE	: 4.1	31.3	4.19	4.24	0.0831	3.42	0.540
3RD QUARTILE	: 9.9	45.8	4.40	4.52	0.1206	5.15	1.000
VOL. WGT. MEAN	: *****	29.7	*****	*****	0.0865	3.08	0.505

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTHEASTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT	JAN 1-81	TO	JAN 1-82			PAGE : 2		
	CALCIUM		CHLORIDE	MAGNESIUM	POTASSIUM	SODIUM	AMMONIUM AS N	FREE H+ LAB
	MG/L		MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
# OF SAMPLES	: 355.000		430.000	341.000	378.000	354.000	405.000	432.0000
MAXIMUM	: 6.600		2.300	1.400	0.800	0.890	2.400	0.4786
MINIMUM	: 0.005		0.005	0.002	0.005	0.005	0.001	0.0002
RANGE	: 6.595		2.295	1.397	0.795	0.885	2.399	0.4785
ARITH. MEAN	: 0.472		0.289	0.075	0.058	0.145	0.457	0.0737
ARITH. STD. DEV.	: 0.749		0.302	0.132	0.082	0.171	0.396	0.0629
GEOM. MEAN	: 0.224		0.185	0.029	0.032	0.079	0.283	0.0472
GEOM. STD. DEV.	: 1.246		1.038	1.440	1.068	1.175	1.230	1.1875
1ST QUARTILE	: 0.095		0.110	0.010	0.012	0.030	0.166	0.0306
2ND QUARTILE	: 0.220		0.200	0.030	0.040	0.080	0.370	0.0569
3RD QUARTILE	: 0.525		0.365	0.075	0.070	0.190	0.600	0.1000
VOL. WGT. MEAN	: 0.288		0.188	0.045	0.038	0.100	0.341	0.0595

***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : JAN 1.81 TO JAN 1.82

PAGE : 1

	PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N MG/L
	MM	UMHO/CM			MG/L	MG/L	
# OF SAMPLES	: 559.0	276.0	128.00	390.00	269.0000	459.00	464.000
MAXIMUM	: 60.5	137.0	6.99	6.80	0.3396	30.00	6.000
MINIMUM	: 0.0	3.9	3.53	3.08	0.0220	0.20	0.005
RANGE	: 60.5	133.1	3.46	3.72	0.3176	29.80	5.995
ARITH. MEAN	: 6.3	35.9	4.39	4.31	0.0911	4.57	0.834
ARITH. STD. DEV.	: 8.2	24.2	0.51	0.50	0.0537	3.87	0.788
GEOM. MEAN	: 2.8	29.0	4.36	4.28	0.0788	3.29	0.557
GEOM. STD. DEV.	: 1.4	0.7	0.11	0.11	0.5352	0.86	1.018
1ST QUARTILE	: 1.0	19.5	4.09	4.01	0.0562	1.95	0.345
2ND QUARTILE	: 3.2	29.3	4.26	4.24	0.0778	3.38	0.620
3RD QUARTILE	: 8.0	45.2	4.52	4.50	0.1093	6.20	1.080
VOL. WGT. MEAN	: *****	32.8	*****	*****	0.0914	3.52	0.525

***** : INSUFFICIENT DATA OR NOT APPLICABLE

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH / REVISED 23AUG83

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF OBSERVED CONCENTRATIONS
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : JAN 1,81 TO JAN 1,82

PAGE : 2

	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
# OF SAMPLES	330.000	451.000	336.000	364.000	361.000	372.000	390.0000
MAXIMUM	3.400	6.300	0.565	1.060	2.100	5.650	0.8318
MINIMUM	0.030	0.005	0.002	0.005	0.005	0.001	0.0002
RANGE	3.370	6.295	0.563	1.055	2.095	5.649	0.8316
ARITH. MEAN	0.436	0.362	0.083	0.063	0.139	0.613	0.0799
ARITH. STD. DEV.	0.464	0.478	0.091	0.100	0.182	0.613	0.0845
GEOM. MEAN	0.271	0.204	0.046	0.036	0.078	0.417	0.0494
GEOM. STD. DEV.	1.007	1.201	1.225	1.021	1.108	0.989	1.1537
1ST QUARTILE	0.130	0.115	0.025	0.020	0.040	0.260	0.0316
2ND QUARTILE	0.275	0.230	0.050	0.035	0.080	0.480	0.0575
3RD QUARTILE	0.590	0.450	0.120	0.070	0.175	0.760	0.0977
VOL. WGT. MEAN	0.301	0.182	0.054	0.041	0.082	0.431	0.0658

**** : INSUFFICIENT DATA OR NOT APPLICABLE

PART VII

SUMMARY STATISTICS OF OBSERVED DEPOSITION BY STATION

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : BALSAM LAKE/DAILY PRECIPITATION #06

PERIOD OF REPORT : JAN 1-81 TO JAN 1-82

PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M ²	FREE H+ LAB MG/M ²	TOTAL H+ TO PH8.3 MG/M ²	SULPHATE MG/M ²	NITRATE AS N MG/M ²	CALCIUM MG/M ²
# OF SAMPLES	116.0	54.0000	104.0000	69.0000	99.00	101.000	81.000
MAXIMUM	31.2	3.5680	3.2540	4.0128	160.60	19.200	19.000
MINIMUM	0.2	0.0033	0.0006	0.0611	0.29	0.089	0.092
RANGE	31.0	3.5647	3.2535	3.9517	160.31	19.111	18.908
ARITH. MEAN	6.4	0.7478	0.4065	0.8334	20.56	3.196	1.884
ARITH. STD. DEV.	6.7	0.6947	0.5144	0.7182	24.74	3.203	2.959
GEOM. MEAN	3.5	0.4900	0.1720	0.5678	10.91	1.954	0.879
GEOM. STD. DEV.	1.2	1.1151	1.6672	0.9569	1.24	1.115	1.232
1ST QUARTILE	1.4	0.2908	0.0866	0.2811	5.05	1.101	0.351
2ND QUARTILE	3.4	0.5713	0.2635	0.6447	11.57	2.152	0.920
3RD QUARTILE	8.2	0.8884	0.5038	1.0950	27.33	4.296	1.898

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : BALSAM LAKE/DAILY PRECIPITATION #06
PERIOD OF REPORT : JAN 1, 81 TO JAN 1, 82
PAGE : 2

	CHLORIDE MG/M ²	MAGNESIUM MG/M ²	POTASSIUM MG/M ²	SODIUM MG/M ²	AMMONIUM AS N MG/M ²
# OF SAMPLES	101.000	86.000	92.000	87.000	88.000
MAXIMUM	27.040	2.900	10.570	2.700	13.420
MINIMUM	0.006	0.003	0.006	0.011	0.019
RANGE	27.034	2.897	10.564	2.689	13.401
ARITH. MEAN	1.216	0.296	0.297	0.476	2.412
ARITH. STD. DEV.	2.839	0.521	1.111	0.595	2.763
GEOM. MEAN	0.506	0.103	0.097	0.237	1.166
GEOM. STD. DEV.	1.379	1.504	1.315	1.225	1.440
1ST QUARTILE	0.220	0.030	0.041	0.095	0.566
2ND QUARTILE	0.565	0.105	0.098	0.211	1.452
3RD QUARTILE	1.272	0.269	0.197	0.601	3.602

***** : INSUFFICIENT DATA.

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY PRECIPITATION #11

PERIOD OF REPORT : JAN 25, 81 TO JAN 1, 82

PAGE : 1

	PRECIP.	FREE H ⁺ FIELD MG/M ²	FREE H ⁺ LAB MG/M ²	TOTAL H ⁺ TO PH8.3 MG/M ²	SULPHATE MG/M ²	NITRATE AS N MG/M ²	CALCIUM MG/M ²
# OF SAMPLES	: 168.0	64.0000	129.0000	88.0000	129.00	130.000	105.000
MAXIMUM	: 47.4	6.0382	2.9620	4.2038	147.90	19.162	8.000
MINIMUM	: 0.0	0.0158	0.0008	0.0360	0.24	0.012	0.060
RANGE	: 47.4	6.0225	2.9612	4.1678	147.66	19.150	7.940
ARITH. MEAN	: 6.0	1.1795	0.4253	0.8401	20.26	3.317	1.574
ARITH. STD. DEV.	: 7.7	1.2946	0.4983	0.7256	23.48	3.123	1.728
GEOM. MEAN	: 2.4	0.6298	0.1887	0.5492	10.50	1.913	0.927
GEOM. STD. DEV.	: 1.6	1.2904	1.5691	1.0344	1.29	1.289	1.080
1ST QUARTILE	: 0.8	0.3734	0.0888	0.2883	4.01	1.090	0.441
2ND QUARTILE	: 2.6	0.7201	0.2179	0.6441	11.89	2.468	0.905
3RD QUARTILE	: 8.1	1.3798	0.6142	1.2248	26.63	4.564	2.184

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIDS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY PRECIPITATION #11

PERIOD OF REPORT : JAN 25, 81 TO JAN 1, 82

PAGE : 2

	CHLORIDE MG/M ^{0.02}	MAGNESIUM MG/M ^{0.02}	POTASSIUM MG/M ^{0.02}	SODIUM MG/M ^{0.02}	AMMONIUM AS N MG/M ^{0.02}
# OF SAMPLES	128.000	104.000	109.000	103.000	120.000
MAXIMUM	11.620	1.806	2.724	7.000	19.836
MINIMUM	0.010	0.003	0.006	0.002	0.002
RANGE	11.610	1.803	2.718	6.998	19.834
APTH. MEAN	1.147	0.273	0.227	0.846	2.353
APTH. STD. DEV.	1.703	0.350	0.328	1.248	2.916
GEOM. MEAN	0.538	0.131	0.120	0.339	1.046
GEOM. STD. DEV.	1.372	1.310	1.154	1.448	1.672
1ST QUARTILE	0.240	0.049	0.049	0.110	0.549
2ND QUARTILE	0.706	0.124	0.120	0.284	1.400
3RD QUARTILE	1.391	0.382	0.265	1.037	3.057

**** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/DAILY PRECIPITATION

#08

PERIOD OF REPORT : JAN 1-81 TO JAN 1-82

PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M ^{**2}	FREE H+ LAB MG/M ^{**2}	TOTAL H+ TO PH8.3 MG/M ^{**2}	SULPHATE MG/M ^{**2}	NITRATE AS N MG/M ^{**2}	CALCIUM MG/M ^{**2}
# OF SAMPLES	: 144.0	56.0000	132.0000	84.0000	132.00	133.000	112.000
MAXIMUM	: 48.2	6.4475	3.9755	5.2070	185.76	20.000	18.090
MINIMUM	: 0.1	0.0985	0.0064	0.0534	0.04	0.007	0.009
RANGE	: 48.1	6.3490	3.9691	5.1536	185.72	19.992	18.080
ARITH. MFAN	: 6.4	0.9642	0.4226	0.9206	21.19	3.229	1.451
ARITH. STD. DEV	: 7.8	1.1393	0.6156	0.9503	31.63	3.630	2.503
GEOM. MEAN	: 3.3	0.6116	0.1968	0.6029	8.78	1.687	0.532
GEOM. STD. DEV.	: 1.3	0.9332	1.3351	0.9444	1.49	1.333	1.500
1ST QUARTILE	: 1.6	0.3694	0.0767	0.3418	3.59	0.812	0.189
2ND QUARTILE	: 3.4	0.5374	0.2290	0.6149	10.07	2.047	0.484
3RD QUARTILE	: 7.3	1.0505	0.4742	1.0401	22.63	4.189	1.503

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/DAILY PRECIPITATION

#08

PERIOD OF REPORT : JAN 1, 81 TO JAN 1, 82

PAGE : 2

	CHLORIDE MG/M ^{2.02}	MAGNESIUM MG/M ^{2.02}	POTASSIUM MG/M ^{2.02}	SODIUM MG/M ^{2.02}	AMMONIUM AS N MG/M ^{2.02}
# OF SAMPLES	133.000	111.000	115.000	115.000	114.000
MAXIMUM	12.031	3.819	5.900	12.939	18.252
MINIMUM	0.012	0.002	0.003	0.015	0.000
RANGE	12.019	3.817	5.897	12.924	18.252
ARITH. MEAN	0.927	0.228	0.236	0.432	2.374
ARITH. STD. DEV.	1.437	0.462	0.592	1.253	3.013
GEOM. MEAN	0.444	0.074	0.090	0.176	0.834
GEOM. STD. DEV.	1.250	1.564	1.391	1.198	1.994
1ST QUARTILE	0.194	0.020	0.037	0.061	0.350
2ND QUARTILE	0.444	0.067	0.087	0.158	1.367
3RD QUARTILE	1.007	0.209	0.244	0.375	2.793

*** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : FERNBERG/DAILY PRECIPITATION

#16

PERIOD OF REPORT : OCT 1, 81 TO DEC 31.81

PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M ²	FREE H+ LAB MG/M ²	TOTAL H+ TO PH8.3 MG/M ²	SULPHATE MG/M ²	NITRATE AS N MG/M ²	CALCIUM MG/M ²
# OF SAMPLES	25.0	3.0000	23.0000	17.0000	23.00	23.000	21.000
MAXIMUM	14.0	0.2517	0.9250	1.2572	14.16	10.080	2.100
MINIMUM	0.1	0.0408	0.0074	0.1156	0.15	0.004	0.006
RANGE	13.9	0.2109	0.9176	1.1416	14.00	10.076	2.094
ARITH. MEAN	4.7	0.1415	0.1362	0.3673	3.92	1.345	0.342
ARITH. STD. DEV.	4.1	0.1058	0.1988	0.2809	3.61	2.115	0.484
GEOM. MEAN	2.7	0.1107	0.0656	0.2992	2.36	0.557	0.136
GEOM. STD. DEV.	1.3	0.9222	1.2731	0.6276	1.20	1.700	1.582
1ST QUARTILE	1.1	*****	0.0213	0.1886	0.98	0.336	0.043
2ND QUARTILE	3.6	*****	0.0676	0.2196	3.02	0.775	0.180
3RD QUARTILE	5.9	*****	0.1387	0.4800	4.62	1.047	0.380

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : FERNBERG/DAILY PRECIPITATION

#16

PERIOD OF REPORT : OCT 1, 81 TO DEC 31, 81

PAGE : 2

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	CHLORIDE MG/M ³ /2	MAGNESIUM MG/M ³ /2	POTASSIUM MG/M ³ /2	SODIUM MG/M ³ /2	AMMONIUM AS N MG/M ³ /2
# OF SAMPLES	24.000	21.000	21.000	21.000	21.000
MAXIMUM	0.840	0.406	0.385	1.475	1.624
MINIMUM	0.013	0.002	0.006	0.006	0.001
RANGE	0.827	0.404	0.379	1.469	1.623
ARITH. MEAN	0.172	0.059	0.104	0.251	0.536
ARITH. STD. DEV.	0.202	0.105	0.105	0.352	0.499
GEOM. MEAN	0.098	0.022	0.062	0.112	0.195
GEOM. STD. DEV.	1.091	1.381	1.104	1.365	2.198
1ST QUARTILE	0.048	0.010	0.028	0.040	0.075
2ND QUARTILE	0.074	0.015	0.059	0.099	0.417
3RD QUARTILE	0.215	0.043	0.126	0.291	0.723

***** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : FORBES TWSP./DAILY PRECIPITATION #13

PERIOD OF REPORT : SEP 23, 81 TO DEC 31, 81

PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M ²	FREE H+ LAB MG/M ²	TOTAL H+ TO PH8.3 MG/M ²	SULPHATE MG/M ²	NITRATE AS N MG/M ²	CALCIUM MG/M ²
# OF SAMPLES	: 44.0	10.0000	36.0000	18.0000	31.00	31.000	24.000
MAXIMUM	: 18.9	0.9693	1.0628	1.7615	45.36	3.780	1.500
MINIMUM	: 0.1	0.0389	0.0010	0.0666	0.04	0.004	0.039
RANGE	: 18.8	0.9304	1.0618	1.6949	45.32	3.776	1.461
ARITH. MEAN	: 3.3	0.2994	0.1318	0.3894	6.19	1.066	0.468
ARITH. STD. DEV.	: 4.8	0.3056	0.2086	0.4163	9.83	1.026	0.467
GEOM. MEAN	: 1.2	0.1926	0.0471	0.2650	1.91	0.482	0.268
GEOM. STD. DEV.	: 1.5	1.0168	1.5669	0.8639	1.79	1.723	1.145
1ST QUARTILE	: 0.4	0.0886	0.0161	0.1391	0.61	0.192	0.110
2ND QUARTILE	: 1.3	0.2108	0.0372	0.2391	1.90	0.742	0.302
3RD QUARTILE	: 3.2	0.2634	0.1751	0.4197	8.09	1.550	0.803

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : FORBES TWSP./DAILY PRECIPITATION #13

PERIOD OF REPORT : SEP 23 81 TO DEC 31 81

PAGE : 2

	CHLORIDE MG/M ²	MAGNESIUM MG/M ²	POTASSIUM MG/M ²	SODIUM MG/M ²	AMMONIUM AS N MG/M ²
# OF SAMPLES	31.000	24.000	24.000	24.000	24.000
MAXIMUM	3.300	0.300	1.024	3.450	2.759
MINIMUM	0.005	0.003	0.006	0.016	0.005
RANGE	3.295	0.297	1.017	3.434	2.754
ARITH. MEAN	0.231	0.052	0.154	0.390	0.815
ARITH. STD. DEV.	0.593	0.069	0.249	0.784	0.857
GEOM. MEAN	0.070	0.026	0.070	0.125	0.349
GEOM. STD. DEV.	1.478	1.190	1.236	1.421	1.667
1ST QUARTILE	0.023	0.010	0.025	0.040	0.130
2ND QUARTILE	0.060	0.023	0.075	0.102	0.486
3RD QUARTILE	0.200	0.063	0.119	0.226	1.242

***** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY PRECIPITATION #12

PERIOD OF REPORT : JAN 1, 81 TO JAN 1, 82

PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M ^{**2}	FREE H+ LAB MG/M ^{**2}	TOTAL H+ TO PH8.3 MG/M ^{**2}	SULPHATE MG/M ^{**2}	NITRATE AS N MG/M ^{**2}	CALCIUM MG/M ^{**2}
# OF SAMPLES	: 141.0	57.0000	111.0000	82.0000	118.00	120.000	95.000
MAXIMUM	: 38.0	4.4068	2.8088	3.9996	150.15	61.920	47.520
MINIMUM	: 0.1	0.0149	0.0003	0.0698	0.62	0.040	0.094
RANGE	: 37.9	4.3919	2.8085	3.9298	149.53	61.880	47.426
ARITH. MEAN	: 7.3	0.8620	0.4460	0.8418	22.98	4.458	3.130
ARITH. STD. DEV.	: 7.6	0.9797	0.5712	0.7907	25.83	6.689	5.457
GEOM. MEAN	: 4.1	0.4921	0.2044	0.5963	13.24	2.388	1.576
GEOM. STD. DEV.	: 1.2	1.1531	1.5463	0.8515	1.15	1.245	1.157
1ST QUARTILE	: 2.1	0.2598	0.1040	0.3709	6.52	1.343	0.635
2ND QUARTILE	: 4.8	0.4695	0.2346	0.6075	14.28	2.822	1.418
3RD QUARTILE	: 9.6	1.0814	0.5690	0.9340	29.36	5.223	3.397

**** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY PRECIPITATION #12

PERIOD OF REPORT : JAN 1, 81 TO JAN 1, 82

PAGE : 2

	CHLORIDE MG/M ²	MAGNESIUM MG/M ²	POTASSIUM MG/M ²	SODIUM MG/M ²	AMMONIUM AS N MG/M ²
# OF SAMPLES	117.000	85.000	100.000	97.000	107.000
MAXIMUM	9.860	10.080	9.000	7.106	16.830
MINIMUM	0.048	0.008	0.017	0.049	0.004
RANGE	9.812	10.071	7.983	7.057	16.826
ARITH. MEAN	1.530	0.533	0.412	0.869	2.934
ARITH. STD. DEV	1.656	1.165	0.830	1.137	2.972
GEOM. MEAN	0.985	0.220	0.236	0.536	1.546
GEOM. STD. DEV.	0.972	1.318	0.990	0.949	1.435
1ST QUARTILE	0.516	0.089	0.124	0.286	0.835
2ND QUARTILE	1.054	0.186	0.232	0.510	2.191
3RD QUARTILE	1.936	0.551	0.426	0.913	3.807

***** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : LAC LA CROIX/DAILY PRECIPITATION #15

PERIOD OF REPORT : SEP 23, 81 TO DEC 12, 81

PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M ²	FREE H+ LAB MG/M ²	TOTAL H+ TO PHB.3 MG/M ²	SULPHATE MG/M ²	NITRATE AS N MG/M ²	CALCIUM MG/M ²
# OF SAMPLES	9.0	1.0000	9.0000	4.0000	7.00	7.000	5.000
MAXIMUM	13.1	0.3692	0.6166	1.0700	23.50	8.500	2.700
MINIMUM	0.3	0.3692	0.0094	0.3887	0.44	0.108	0.057
RANGE	12.8	0.0	0.6072	0.6813	23.06	8.392	2.643
ARITH. MEAN	4.4	*****	0.1476	0.5996	7.11	2.349	0.926
ARITH. STD. DEV.	4.6	*****	0.1871	0.3160	7.62	2.918	1.065
GEOM. MEAN	2.3	*****	0.0793	0.5504	4.29	1.170	0.438
GEOM. STD. DEV.	1.3	*****	1.2456	0.4521	1.22	1.402	1.557
1ST QUARTILE	0.8	*****	0.0339	0.4275	1.45	0.314	0.099
2ND QUARTILE	1.6	*****	0.0758	0.4598	4.55	0.952	0.463
3RD QUARTILE	5.6	*****	0.1410	0.7716	7.12	2.705	0.866

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : LAC LA CROIX/DAILY PRECIPITATION #15

PERIOD OF REPORT : SEP 23, 81 TO DEC 12, 81

PAGE : 2

	CHLORIUE MG/M ²	MAGNESIUM MG/M ²	POTASSIUM MG/M ²	SODIUM MG/M ²	AMMONIUM AS N MG/M ²
# OF SAMPLES	7.000	5.000	5.000	5.000	7.000
MAXIMUM	0.900	0.150	0.786	1.100	5.500
MINIMUM	0.093	0.006	0.006	0.070	0.038
RANGE	0.805	0.144	0.780	1.030	5.462
ARITH. MEAN	0.405	0.056	0.298	0.430	1.301
ARITH. STD. DEV	0.276	0.057	0.333	0.423	1.891
GEOM. MEAN	0.319	0.034	0.118	0.256	0.577
GEOM. STD. DEV.	0.793	1.220	1.905	1.242	1.518
1ST QUARTILE	0.118	0.012	0.038	0.070	0.187
2ND QUARTILE	0.326	0.030	0.100	0.231	0.612
3RD QUARTILE	0.522	0.054	0.314	0.455	1.006

***** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGWOODS/DAILY PRECIPITATION

#02

PERIOD OF REPORT : DEC 31. 80 TO JAN 1.82

PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M ²	FREE H+ LAB MG/M ²	TOTAL H+ TO PH8.3 MG/M ²	SULPHATE MG/M ²	NITRATE AS N MG/M ²	CALCIUM MG/M ²
	MM	MG/M ²	MG/M ²	MG/M ²	MG/M ²	MG/M ²	MG/M ²
# OF SAMPLES :	125.0	30.0000	87.0000	72.0000	110.00	110.000	81.000
MAXIMUM :	53.0	3.1936	3.3890	4.0537	199.20	23.634	47.077
MINIMUM :	0.1	0.0046	0.0039	0.0578	0.28	0.031	0.285
RANGE :	52.9	3.1890	3.3851	3.9959	198.92	23.603	46.792
ARITH. MEAN :	7.3	0.7954	0.5769	0.9544	28.81	4.577	3.980
ARITH. STD. DEV. :	8.3	0.7924	0.6912	0.9753	33.71	4.400	6.305
GEOM. MEAN :	3.8	0.4048	0.2621	0.5528	14.70	2.591	2.320
GEOM. STD. DEV. :	1.3	1.5328	1.4884	1.1445	1.31	1.274	0.970
1ST QUARTILE :	1.6	0.2282	0.1156	0.2291	6.12	1.173	1.142
2ND QUARTILE :	4.1	0.5449	0.3155	0.6742	15.77	3.478	2.256
3RD QUARTILE :	9.4	1.0098	0.8080	1.3508	37.94	5.909	3.958

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGWOODS/DAILY PRECIPITATION

#02

PERIOD OF REPORT : DEC 31, 80 TO JAN 1, 82

PAGE : 2

	CHLORIDE MG/M ^{0.2}	MAGNESIUM MG/M ^{0.2}	POTASSIUM MG/M ^{0.2}	SODIUM MG/M ^{0.2}	AMMONIUM AS N MG/M ^{0.2}
# OF SAMPLES	104.000	86.000	97.000	97.000	100.000
MAXIMUM	7.850	5.280	2.603	5.966	19.422
MINIMUM	0.020	0.015	0.012	0.054	0.031
RANGE	7.830	5.265	2.596	5.912	19.391
ARITH. MEAN	1.651	0.570	0.429	0.858	3.843
ARITH. STD. DEV.	1.395	0.720	0.428	0.916	4.138
GEOM. MEAN	1.040	0.340	0.273	0.548	2.084
GEOM. STD. DEV.	1.166	1.066	1.030	1.026	1.270
1ST QUARTILE	0.669	0.165	0.127	0.246	0.925
2ND QUARTILE	1.249	0.382	0.298	0.582	2.489
3RD QUARTILE	2.167	0.639	0.537	1.129	4.818

***** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : MELBOURNE/DAILY PRECIPITATION

#01

PERIOD OF REPORT : JAN 3. 81 TO JAN 1.82

PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE	NITRATE AS N MG/M**2	CALCIUM MG/M**2
	MM				MG/M**2		
# OF SAMPLES	120.0	33.0000	99.0000	64.0000	101.00	101.000	83.000
MAXIMUM	45.2	2.2654	2.9491	3.9816	127.98	17.380	10.682
MINIMUM	0.1	0.0076	0.0087	0.0828	0.80	0.042	0.182
RANGE	45.1	2.2577	2.9404	3.8988	127.18	17.338	10.500
ARITH. MEAN	6.7	0.7317	0.4979	0.9890	25.89	4.233	2.441
ARITH. STD. DEV.	7.6	0.6147	0.5274	0.7296	23.16	3.316	2.363
GEOM. MEAN	3.7	0.3882	0.2567	0.7305	16.99	2.824	1.569
GEOM. STD. DEV.	1.2	1.4721	1.3570	0.8608	1.02	1.061	0.981
1ST QUARTILE	1.6	0.1935	0.1055	0.4178	10.01	1.596	0.743
2ND QUARTILE	3.9	0.5438	0.3348	0.8532	17.73	3.014	1.545
3RD QUARTILE	8.8	1.0623	0.7094	1.4688	37.88	5.960	3.180

1
C5
C7
1

***** : INSUFFICIENT DATA

NOTE(1): PRFCIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : MELBOURNE/DAILY PRECIPITATION #01

PERIOD OF REPORT : JAN 3, 81 TO JAN 1, 82

PAGE : 2

	CHLORIDE MG/M ^{0.2}	MAGNESIUM MG/M ^{0.2}	POTASSIUM MG/M ^{0.2}	SODIUM MG/M ^{0.2}	AMMONIUM AS N MG/M ^{0.2}
# OF SAMPLES	100.000	86.000	86.000	79.000	84.000
MAXIMUM	7.584	1.960	6.342	5.688	45.738
MINIMUM	0.027	0.013	0.027	0.058	0.190
RANGE	7.557	1.947	6.315	5.630	45.548
ARITH. MEAN	1.531	0.432	0.533	0.998	4.004
ARITH. STD. DEV.	1.235	0.441	1.060	0.980	5.395
GEOM. MEAN	1.120	0.241	0.255	0.688	2.588
GEOM. STD. DEV.	0.891	1.221	1.085	0.890	0.952
1ST QUARTILE	0.724	0.116	0.112	0.378	1.435
2ND QUARTILE	1.242	0.237	0.240	0.696	2.844
3RD QUARTILE	1.912	0.606	0.490	1.350	4.956

***** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : NITHGROVE/DAILY PRECIPITATION

#07

PERIOD OF REPORT : JAN 26, 81 TO JAN 1, 82

PAGE : 1

	PRECIP.	FREE H ⁺ FIELD MM	FREE H ⁺ LAB MG/M ^{2.2}	TOTAL H ⁺ TO PH8.3 MG/M ^{2.2}	SULPHATE MG/M ^{2.2}	NITRATE AS N MG/M ^{2.2}	CALCIUM MG/M ^{2.2}
# OF SAMPLES	: 128.0	58.0000	115.0000	79.0000	118.00	118.000	93.000
MAXIMUM	: 40.6	6.5173	4.7214	5.9710	197.75	21.700	18.626
MINIMUM	: 0.2	0.0054	0.0004	0.0502	0.28	0.008	0.090
RANGE	: 40.4	6.5119	4.7209	5.9208	197.47	21.692	18.536
ARITH. MEAN	: 6.9	0.9645	0.4349	0.9060	22.39	3.323	2.056
ARITH. STD. DEV	: 8.0	1.1727	0.6747	0.9966	31.32	3.466	2.822
GEOM. MEAN	: 3.7	0.5575	0.1809	0.5932	10.78	1.843	1.114
GEOM. STD. DEV.	: 1.2	1.1482	1.5589	0.9261	1.31	1.328	1.116
1ST QUARTILE	: 1.6	0.2852	0.0800	0.2921	4.43	1.194	0.497
2ND QUARTILE	: 4.0	0.5873	0.2300	0.6357	11.77	2.287	1.128
3RD QUARTILE	: 8.9	1.1633	0.4617	1.0668	24.83	4.524	2.070

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : NITHGROVE/DAILY PRECIPITATION

#07

PERIOD OF REPORT : JAN 26, 81 TO JAN 1, 82

PAGE : 2

	CHLORIDE MG/M ^{2.2}	MAGNESIUM MG/M ^{2.2}	POTASSIUM MG/M ^{2.2}	SODIUM MG/M ^{2.2}	AMMONIUM AS N MG/M ^{2.2}
# OF SAMPLES	117.000	92.000	88.000	97.000	92.000
MAXIMUM	5.920	3.886	1.742	3.948	18.600
MINIMUM	0.012	0.006	0.015	0.035	0.001
RANGE	5.908	3.879	1.727	3.913	18.599
ARITH. MEAN	1.045	0.305	0.352	0.555	2.962
ARITH. STD. DEV.	1.076	0.528	0.314	0.694	3.837
GEOM. MEAN	0.627	0.139	0.237	0.329	1.313
GEOM. STD. DEV.	1.149	1.268	0.968	1.009	1.539
1ST QUARTILE	0.337	0.051	0.133	0.160	0.685
2ND QUARTILE	0.741	0.151	0.300	0.315	1.435
3RD QUARTILE	1.380	0.337	0.455	0.608	3.347

***** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY PRECIPITATION #03

PERIOD OF REPORT : JAN 1, 81 TO JAN 1, 82

	PRECIP.	FREE H+ FIELD MG/M ²	FREE H+ LAB MG/M ²	TOTAL H+ TO PH8.3 MG/M ²	SULPHATE MG/M ²	NITRATE AS N MG/M ²	CALCIUM MG/M ²	PAGE : 1
# OF SAMPLES	185.0	34.0000	114.0000	71.0000	140.00	143.000	88.000	
MAXIMUM	60.5	2.6082	4.0545	5.2100	217.50	19.000	14.720	
MINIMUM	0.0	0.0016	0.0001	0.0447	0.28	0.012	0.091	
RANGE	60.5	2.6066	4.0544	5.1653	217.22	18.988	14.629	139
ARITH. MEAN	5.0	0.6809	0.4830	1.0642	23.54	3.155	2.537	
ARITH. STD. DEV	7.8	0.5793	0.6798	1.0896	34.48	3.576	2.895	
GEOM. MEAN	1.8	0.3860	0.1488	0.6071	8.86	1.453	1.413	
GEOM. STD. DEV.	1.6	1.5529	1.9472	1.1894	1.57	1.507	1.148	
1ST QUARTILE	0.6	0.3385	0.0520	0.2416	2.41	0.584	0.566	
2ND QUARTILE	1.8	0.5507	0.2121	0.7760	11.53	1.986	1.567	
3RD QUARTILE	6.2	0.8143	0.5834	1.3945	29.56	4.263	3.175	

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY PRECIPITATION #03

PERIOD OF REPORT : JAN 1, 81 TO JAN 1, 82

PAGE : 2

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	CHLORIDE MG/M ^{**2}	MAGNESIUM MG/M ^{**2}	POTASSIUM MG/M ^{**2}	SODIUM MG/M ^{**2}	AMMONIUM AS N MG/M ^{**2}
# OF SAMPLES	142.000	90.000	98.000	101.000	105.000
MAXIMUM	16.920	3.200	1.326	11.200	31.460
MINIMUM	0.020	0.020	0.009	0.020	0.004
RANGE	16.900	3.180	1.317	11.180	31.456
ARITH. MEAN	1.232	0.474	0.279	0.572	3.128
ARITH. STD. DEV.	2.073	0.612	0.307	1.154	3.878
GEOM. MEAN	0.628	0.248	0.159	0.326	1.573
GEOM. STD. DEV.	1.171	1.168	1.142	0.987	1.455
1ST QUARTILE	0.308	0.106	0.076	0.162	0.627
2ND QUARTILE	0.633	0.238	0.183	0.298	2.154
3RD QUARTILE	1.448	0.516	0.333	0.617	4.332

***** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAILTON/DAILY PRECIPITATION

#10

PERIOD OF REPORT : JAN 6, 81 TO JAN 1, 82

PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M ²	FREE H+ LAB MG/M ²	TOTAL H+ TO PH8.3 MG/M ²	SULPHATE MG/M ²	NITRATE AS N MG/M ²	CALCIUM MG/M ²
	MM	MG/M ²	MG/M ²	MG/M ²	MG/M ²	MG/M ²	MG/M ²
# OF SAMPLES	: 117.0	48.0000	99.0000	66.0000	103.00	103.000	80.000
MAXIMUM	: 55.0	19.1790	3.2428	4.9378	171.45	23.241	26.400
MINIMUM	: 0.2	0.0643	0.0003	0.0364	0.32	0.085	0.089
RANGE	: 54.8	19.1146	3.2425	4.9014	171.13	23.156	26.311
ARITH. MEAN	: 8.5	2.0078	0.5487	1.1248	28.62	4.728	3.610
ARITH. STD. DEV	: 10.5	3.1027	0.5810	0.9370	31.17	4.495	4.706
GEOM. MEAN	: 4.0	1.0596	0.2636	0.7678	14.78	2.767	2.000
GEOM. STD. DEV.	: 1.3	1.1496	1.5719	0.9923	1.33	1.236	1.137
1ST QUARTILE	: 1.7	0.5829	0.1310	0.4524	6.66	1.626	1.038
2ND QUARTILE	: 4.0	1.0570	0.3403	0.8273	16.65	3.744	1.915
3RD QUARTILE	: 12.1	2.2327	0.7865	1.4632	44.43	6.380	4.533

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAILTON/DAILY PRECIPITATION

#10

PERIOD OF REPORT : JAN 6. 81 TO JAN 1.82

PAGE : 2

	CHLORIDE MG/M ^{**2}	MAGNESIUM MG/M ^{**2}	POTASSIUM MG/M ^{**2}	SODIUM MG/M ^{**2}	AMMONIUM AS N MG/M ^{**2}
# OF SAMPLES	101.000	80.000	87.000	79.000	90.000
MAXIMUM	11.284	4.400	2.286	6.552	44.000
MINIMUM	0.010	0.004	0.007	0.011	0.010
RANGE	11.274	4.396	2.279	6.541	43.990
ARITH. MEAN	1.932	0.473	0.445	1.263	3.829
ARITH. STD. DEV.	1.739	0.693	0.470	1.120	5.484
GEOM. MEAN	1.254	0.221	0.269	0.795	1.963
GEOM. STD. DEV.	1.087	1.338	1.121	1.168	1.323
1ST QUARTILE	0.696	0.117	0.147	0.399	0.977
2ND QUARTILE	1.582	0.202	0.267	0.942	2.288
3RD QUARTILE	2.554	0.566	0.518	1.661	4.477

***** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY PRECIPITATION #05

PERIOD OF REPORT : FEB 1. 81 TO JAN 1.82 PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M ²	FREE H+ LAB MG/M ²	TOTAL H+ TO PH8.3 MG/M ²	SULPHATE MG/M ²	NITRATE AS N MG/M ²	CALCTUM MG/M ²
	MM						
# OF SAMPLES	: 122.0	56.0000	104.0000	65.0000	112.00	110.000	80.000
MAXIMUM	: 37.2	3.4717	3.0237	4.5384	154.38	19.716	15.040
MINIMUM	: 0.2	0.0014	0.0003	0.0546	0.15	0.078	0.180
RANGE	: 37.0	3.4703	3.0234	4.4838	154.23	19.638	14.860
ARITH. MEAN	: 6.5	0.8848	0.4527	0.9148	22.50	3.464	2.310
ARITH. STD. DEV	: 7.1	0.8593	0.5897	0.8926	28.93	3.597	3.007
GEOM. MEAN	: 3.6	0.5564	0.1993	0.5896	10.95	1.942	1.308
GEOM. STD. DEV.	: 1.2	1.1896	1.6380	1.0131	1.32	1.205	1.040
1ST QUARTILE	: 1.6	0.3425	0.0886	0.3114	4.32	0.778	0.586
2ND QUARTILE	: 3.6	0.6084	0.2654	0.6449	12.90	2.275	1.231
3RD QUARTILE	: 9.0	1.1504	0.5529	1.1392	27.64	4.886	2.413

***** : INSUFFICIENT DATA
 NOTE(1): PRFCIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY PRECIPITATION #05

PERIOD OF REPORT : FEB 1, 81 TO JAN 1, 82

PAGE : 2

	CHLORIDE MG/M ^{2.2}	MAGNESIUM MG/M ^{2.2}	POTASSIUM MG/M ^{2.2}	SODIUM MG/M ^{2.2}	AMMONIUM AS N MG/M ^{2.2}
# OF SAMPLES	103.000	85.000	88.000	84.000	92.000
MAXIMUM	6.750	2.444	0.860	4.650	18.972
MINIMUM	0.045	0.006	0.010	0.026	0.003
RANGE	6.705	2.438	0.850	4.624	18.969
ARITH. MEAN	1.339	0.306	0.238	0.892	2.886
ARITH. STD. DEV.	1.308	0.411	0.231	0.881	3.572
GEOM. MEAN	0.839	0.147	0.148	0.554	1.316
GEOM. STD. DEV.	1.039	1.296	1.033	1.072	1.552
1ST QUARTILE	0.428	0.062	0.079	0.294	0.583
2ND QUARTILE	0.822	0.147	0.147	0.637	1.605
3RD QUARTILE	1.756	0.373	0.303	1.125	3.699

**** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO/DAILY PRECIPITATION

#14

PERIOD OF REPORT : OCT 16, 81 TO DEC 31, 81

PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M ²	FREE H+ LAB MG/M ²	TOTAL H+ TO PH8.3 MG/M ²	SULPHATE MG/M ²	NITRATE AS N MG/M ²	CALCIUM MG/M ²
# OF SAMPLES	: 29.0	4.0000	26.0000	10.0000	25.00	25.000	19.000
MAXIMUM	: 12.0	0.3461	0.3508	0.7272	10.93	4.575	1.504
MINIMUM	: 0.1	0.0565	0.0033	0.1256	0.15	0.056	0.042
RANGE	: 11.9	0.2896	0.3475	0.6016	10.79	4.519	1.462
ARITH. MEAN	: 2.4	0.2042	0.0752	0.3292	2.27	1.112	0.309
ARITH. STD. DEV	: 2.8	0.1578	0.0986	0.2017	2.88	1.301	0.414
GEOM. MEAN	: 1.4	0.1508	0.0345	0.2817	1.19	0.552	0.163
GEOM. STD. DEV.	: 1.1	0.9502	1.3170	0.5804	1.19	1.286	1.091
1ST QUARTILE	: 0.7	0.0678	0.0118	0.1761	0.49	0.193	0.060
2ND QUARTILE	: 1.1	0.2070	0.0416	0.2521	1.21	0.483	0.105
3RD QUARTILE	: 3.4	0.3405	0.0820	0.3886	2.05	1.153	0.279

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO/DAILY PRECIPITATION

#14

PERIOD OF REPORT : OCT 16. 81 TO DEC 31.81

PAGE : 2

	CHLORIDE MG/M ^{0.2}	MAGNESIUM MG/M ^{0.2}	POTASSIUM MG/M ^{0.2}	SODIUM MG/M ^{0.2}	AMMONIUM AS N MG/M ^{0.2}
# OF SAMPLES	25.000	19.000	19.000	19.000	15.000
MAXIMUM	0.560	0.211	0.150	0.300	2.700
MINIMUM	0.028	0.002	0.008	0.017	0.003
RANGE	0.532	0.210	0.142	0.283	2.697
APTH. MEAN	0.163	0.029	0.064	0.124	0.693
APTH. STD. DEV.	0.124	0.052	0.048	0.095	0.766
GEOM. MEAN	0.123	0.012	0.045	0.089	0.290
GEOM. STD. DEV.	0.796	1.243	0.941	0.902	1.834
1ST QUARTILE	0.073	0.004	0.019	0.038	0.158
2ND QUARTILE	0.129	0.010	0.047	0.088	0.365
3RD QUARTILE	0.207	0.022	0.104	0.194	0.995

***** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIDS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : WELLESLEY/DAILY PRECIPITATION #04

PERIOD OF REPORT : JAN 27, 81 TO JAN 1, 82

PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M ^{**2}	FREE H+ LAB MG/M ^{**2}	TOTAL H+ TO PH8.3 MG/M ^{**2}	SULPHATE MG/M ^{**2}	NITRATE AS N MG/M ^{**2}	CALCTUM MG/M ^{**2}
	MM						
# OF SAMPLES	: 129.0	31.0000	90.0000	62.0000	108.00	110.000	78.000
MAXIMUM	: 57.2	3.0718	3.2915	4.5188	133.65	16.016	15.732
MINIMUM	: 0.1	0.0398	0.0009	0.0648	0.52	0.026	0.200
RANGE	: 57.1	3.0320	3.2906	4.4540	133.13	15.990	15.532
ARITH. MEAN	: 6.6	0.7391	0.5415	1.0691	25.16	3.551	2.467
ARITH. STD. DEV	: 9.1	0.7500	0.6845	0.9834	29.10	3.328	2.743
GEOM. MEAN	: 2.9	0.4284	0.2149	0.6885	12.71	2.170	1.582
GEOM. STD. DEV.	: 1.4	1.1780	1.6519	1.0258	1.30	1.121	0.939
1ST QUARTILE	: 1.0	0.1790	0.0765	0.2811	4.90	1.040	0.835
2ND QUARTILE	: 3.2	0.4609	0.2982	0.8921	14.79	2.256	1.422
3RD QUARTILE	: 8.2	0.9354	0.6798	1.3170	33.95	4.990	2.865

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***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : WELLESLEY/DAILY PRECIPITATION #04

PERIOD OF REPORT : JAN 27, 81 TO JAN 1,82

PAGE : 2

	CHLORIDE MG/M ²	MAGNESIUM MG/M ²	POTASSIUM MG/M ²	SODIUM MG/M ²	AMMONIUM AS N MG/M ²
# OF SAMPLES	105.000	74.000	83.000	84.000	83.000
MAXIMUM	4.600	6.440	1.581	2.048	17.286
MINIMUM	0.013	0.026	0.012	0.020	0.285
RANGE	4.587	6.414	1.569	2.028	17.000
ARITH. MEAN	1.033	0.528	0.208	0.479	3.765
ARITH. STD. DEV.	0.985	0.858	0.230	0.466	3.144
GEOM. MEAN	0.629	0.283	0.141	0.312	2.644
GEOM. STD. DEV.	1.129	1.083	0.899	0.978	0.909
1ST QUARTILE	0.285	0.135	0.081	0.166	1.257
2ND QUARTILE	0.686	0.291	0.154	0.291	2.805
3RD QUARTILE	1.411	0.550	0.229	0.564	5.200

***** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : WHITMAN CREEK/DAILY PRECIPITATION #09

PERIOD OF REPORT : JAN 6. 81 TO JAN 1.82

PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M ²	FREE H+ LAB MG/M ²	TOTAL H+ TO PH8.3 MG/M ²	SULPHATE MG/M ²	NITRATE AS N MG/M ²	CALCIUM MG/M ²
# OF SAMPLES	: 110.0	56.0000	91.0000	63.0000	86.00	90.000	74.000
MAXIMUM	: 51.0	18.5170	3.9215	5.3240	264.00	21.560	30.360
MINIMUM	: 0.1	0.0290	0.0003	0.0317	0.79	0.115	0.171
RANGE	: 50.9	18.4880	3.9212	5.2923	263.21	21.445	30.189
ARITH. MEAN	: 8.9	2.0901	0.5448	1.2243	30.41	4.600	3.399
ARITH. STD. DEV	: 10.9	3.8106	0.8258	1.3298	44.83	4.702	5.407
GEOM. MEAN	: 4.2	0.7491	0.1967	0.7296	14.24	2.670	1.668
GEOM. STD. DEV.	: 1.3	1.4576	1.7308	1.0738	1.30	1.167	1.166
1ST QUARTILE	: 1.4	0.2279	0.0909	0.3248	5.79	1.286	0.701
2ND QUARTILE	: 4.8	0.7915	0.2465	0.7571	18.08	2.822	1.630
3RD QUARTILE	: 12.2	1.5744	0.5895	1.4321	34.51	6.083	3.927

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : WHITMAN CREEK/DAILY PRECIPITATION #09

PERIOD OF REPORT : JAN 6, 81 TO JAN 1, 82

PAGE : 2

	CHLORIUE MG/M ³ /2	MAGNESIUM MG/M ³ /2	POTASSIUM MG/M ³ /2	SODIUM MG/M ³ /2	AMMONIUM AS N MG/M ³ /2
# OF SAMPLES	: 82.000	71.000	80.000	73.000	86.000
MAXIMUM	: 28.750	8.200	2.772	17.500	22.000
MINIMUM	: 0.012	0.007	0.011	0.070	0.029
RANGE	: 28.737	8.193	2.761	17.430	21.971
ARITH. MEAN	: 2.025	0.580	0.397	1.031	3.426
ARITH. STD. DEV.	: 3.820	1.163	0.474	2.233	4.243
GEOM. MEAN	: 0.915	0.226	0.214	0.465	1.603
GEOM. STD. DEV.	: 1.273	1.363	1.192	1.140	1.396
1ST QUARTILE	: 0.416	0.072	0.095	0.220	0.659
2ND QUARTILE	: 0.989	0.231	0.238	0.363	1.843
3RD QUARTILE	: 1.856	0.502	0.476	1.015	4.498

***** : INSUFFICIENT DATA

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PART VIII

SUMMARY STATISTICS OF OBSERVED DEPOSITION BY REGION

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : CENTRAL REGION/DAILY PRECIPITATION

PERIOD OF REPORT : JAN 1, 81 TO JAN 1, 82

PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M ²	FREE H+ LAB MG/M ²	TOTAL H+ TO PH8.3 MG/M ²	SULPHATE MG/M ²	NITRATE AS N MG/M ²	CALCTUM MG/M ²
# OF SAMPLES	: 510.0	234.0000	455.0000	297.0000	461.00	462.000	366.000
MAXIMUM	: 48.2	6.5173	4.7214	5.9710	197.75	21.700	19.000
MINIMUM	: 0.1	0.0014	0.0003	0.0502	0.04	0.007	0.009
RANGE	: 48.1	6.5159	4.7210	5.9208	197.71	21.692	18.990
ARITH. MEAN	: 6.6	0.8953	0.4289	0.8952	21.68	3.301	1.888
ARITH. STD. DEV	: 7.4	0.9951	0.6024	0.8983	29.45	3.481	2.810
GEOM. MEAN	: 3.5	0.5552	0.1874	0.5891	10.23	1.843	0.873
GEOM. STD. DEV.	: 1.2	1.0903	1.5386	0.9533	1.35	1.254	1.300
1ST QUARTILE	: 1.6	0.3200	0.0824	0.3209	4.20	0.960	0.357
2ND QUARTILE	: 3.8	0.5783	0.2414	0.6363	11.29	2.166	0.953
3RD QUARTILE	: 8.0	1.0505	0.4946	1.0914	25.92	4.555	1.998

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : CENTRAL REGION/DAILY PRECIPITATION

PERIOD OF REPORT : JAN 1, 81 TO JAN 1, 82

PAGE : 2

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	CHLORIDE MG/M ²	MAGNESIUM MG/M ²	POTASSIUM MG/M ²	SODIUM MG/M ²	AMMONIUM AS N MG/M ²
# OF SAMPLES	454.000	374.000	383.000	383.000	386.000
MAXIMUM	27.040	3.886	10.570	12.939	18.972
MINIMUM	0.006	0.002	0.003	0.011	0.000
RANGE	27.034	3.884	10.567	12.928	18.972
ARITH. MEAN	1.115	0.280	0.278	0.574	2.645
ARITH. STD. DEV.	1.757	0.482	0.660	0.932	3.310
GEOM. MEAN	0.577	0.109	0.128	0.284	1.118
GEOM. STD. DEV.	1.230	1.445	1.263	1.205	1.674
1ST QUARTILE	0.282	0.039	0.057	0.115	0.527
2ND QUARTILE	0.633	0.120	0.130	0.281	1.452
3RD QUARTILE	1.320	0.304	0.312	0.678	3.376

***** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY.

STATION NAME : NORTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : SEP 23, 81 TO DEC 31,81

PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M ^{**2}	FREE H+ LAB MG/M ^{**2}	TOTAL H+ TO PH8.3 MG/M ^{**2}	SULPHATE MG/M ^{**2}	NITRATE AS N MG/M ^{**2}	CALCIUM MG/M ^{**2}
# OF SAMPLES	: 107.0	18.0000	94.0000	49.0000	86.00	86.000	69.000
MAXIMUM	: 18.9	0.9693	1.0628	1.7615	45.36	10.080	2.700
MINIMUM	: 0.1	0.0389	0.0010	0.0666	0.04	0.004	0.006
RANGE	: 18.8	0.9304	1.0618	1.6949	45.32	10.076	2.694
ARITH. MEAN	: 3.5	0.2558	0.1187	0.3866	4.52	1.258	0.419
ARITH. STD. DEV.	: 4.2	0.2449	0.1792	0.3258	6.86	1.652	0.529
GEOM. MEAN	: 1.6	0.1724	0.0493	0.2970	1.88	0.560	0.197
GEOM. STD. DEV.	: 1.4	0.9418	1.4091	0.7133	1.46	1.567	1.331
1ST QUARTILE	: 0.6	0.0678	0.0152	0.1851	0.71	0.249	0.071
2ND QUARTILE	: 1.6	0.2108	0.0568	0.2522	2.35	0.761	0.185
3RD QUARTILE	: 4.3	0.2993	0.1445	0.4871	5.12	1.535	0.482

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***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION:
APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : SEP 23, 81 TO DEC 31, 81

PAGE : 2

	CHLORIDE MG/M ^{2.2}	MAGNESIUM MG/M ^{2.2}	POTASSIUM MG/M ^{2.2}	SODIUM MG/M ^{2.2}	AMMONIUM AS N MG/M ^{2.2}
# OF SAMPLES	: 87.000	: 59.000	: 69.000	: 69.000	: 67.000
MAXIMUM	: 3.300	: 0.406	: 1.024	: 3.450	: 5.500
MINIMUM	: 0.005	: 0.002	: 0.006	: 0.006	: 0.001
RANGE	: 3.295	: 0.404	: 1.018	: 3.444	: 5.499
APTH. MEAN	: 0.204	: 0.048	: 0.124	: 0.277	: 0.751
APTH. STD. DEV.	: 0.384	: 0.077	: 0.187	: 0.520	: 0.911
GEOM. MEAN	: 0.102	: 0.020	: 0.062	: 0.116	: 0.294
GEOM. STD. DEV.	: 1.211	: 1.287	: 1.178	: 1.267	: 1.862
1ST QUARTILE	: 0.047	: 0.009	: 0.025	: 0.043	: 0.137
2ND QUARTILE	: 0.104	: 0.016	: 0.067	: 0.096	: 0.465
3RD QUARTILE	: 0.243	: 0.046	: 0.126	: 0.240	: 0.490

***** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTHEASTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : JAN 1, 81 TO JAN 1, 82

PAGE : 1

	PRECIP.	FREE H+ FIELD MG/M ²	FREE H+ LAB MG/M ²	TOTAL H+ TO PH8.3 MG/M ²	SULPHATE MG/M ²	NITRATE AS N MG/M ²	CALCIUM MG/M ²
# OF SAMPLES	536.0	225.0000	430.0000	299.0000	436.00	443.000	354.000
MAXIMUM	55.0	19.1790	3.9215	5.3240	264.00	61.920	47.520
MINIMUM	0.0	0.0149	0.0003	0.0317	0.24	0.012	0.060
RANGE	55.0	19.1641	3.9212	5.2923	263.76	61.908	47.460
ARITH. MEAN	7.5	1.5024	0.4843	0.9843	24.97	4.214	2.833
ARTTH. STD. DEV.	9.1	2.5636	0.6173	0.9546	31.28	4.935	4.529
GEOM. MEAN	3.5	0.6902	0.2099	0.6421	12.87	2.369	1.438
GEOM. STD. DEV.	1.4	1.2931	1.5990	0.9916	1.27	1.246	1.166
1ST QUARTILE	1.4	0.3211	0.0966	0.3566	5.76	1.298	0.643
2ND QUARTILE	4.1	0.7462	0.2531	0.6900	15.32	2.815	1.399
3RD QUARTILE	9.9	1.5247	0.6108	1.2186	31.47	5.555	3.270

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
APIDS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTHEASTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : JAN 1+81 TO JAN 1+82

PAGE : 2

	CHLORIDE MG/M ^{0.2}	MAGNESIUM MG/M ^{0.2}	POTASSIUM MG/M ^{0.2}	SODIUM MG/M ^{0.2}	AMMONIUM AS N MG/M ^{0.2}
# OF SAMPLES	428.000	340.000	376.000	352.000	403.000
MAXIMUM	28.750	10.080	8.000	17.500	44.000
MINIMUM	0.010	0.003	0.006	0.002	0.002
RANGE	28.740	10.077	7.994	17.498	43.998
ARITH. MEAN	1.605	0.449	0.363	0.984	3.066
ARITH. STD. DEV.	2.282	0.883	0.565	1.461	3.953
GEOM. MEAN	0.858	0.189	0.196	0.497	1.463
GEOM. STD. DEV.	1.227	1.346	1.155	1.233	1.492
1ST QUARTILE	0.441	0.078	0.096	0.215	0.731
2ND QUARTILE	0.964	0.185	0.204	0.512	1.874
3RD QUARTILE	1.864	0.491	0.431	1.181	3.962

***** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT
 SUMMARY STATISTICS OF CALCULATED DEPOSITION
 APIOS - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT	JAN 1, 81	TO	JAN 1, 82		PAGE :	1	
	PRECIP.	FREE H ⁺	FREE H ⁺	TOTAL H ⁺	SULPHATE	NITRATE	CALCIUM
	MM	FIELD	LAB	TO PH8.3	MG/M ^{2.2}	AS N	MG/M ^{2.2}
		MG/M ^{2.2}	MG/M ^{2.2}	MG/M ^{2.2}	MG/M ^{2.2}	MG/M ^{2.2}	MG/M ^{2.2}
# OF SAMPLES	:	559.0	128.0000	390.0000	269.0000	459.00	464.000
MAXIMUM	:	60.5	3.1936	4.0545	5.2100	217.50	23.634
MINIMUM	:	0.0	0.0016	0.0001	0.0447	0.28	0.012
RANGE	:	60.5	3.1919	4.0544	5.1653	217.22	23.622
ARITH. MEAN	:	6.3	0.7349	0.5212	1.0181	25.70	3.821
ARITH. STD. DEV.	:	8.2	0.6785	0.6469	0.9538	30.82	3.713
GEOM. MEAN	:	2.8	0.4009	0.2111	0.6369	12.57	2.118
GEOM. STD. DEV.	:	1.4	1.4278	1.6539	1.0687	1.36	1.300
1ST QUARTILE	:	1.0	0.2316	0.0836	0.2875	5.17	1.090
2ND QUARTILE	:	3.2	0.5449	0.2774	0.7824	15.31	2.694
3RD QUARTILE	:	8.0	1.0240	0.7090	1.3688	35.43	5.516

**** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITION
AP10S - ACID PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : JAN 1, 81 TO JAN 1, 82

PAGE : 2

	CHLORIDE MG/M ^{0.2}	MAGNESIUM MG/M ^{0.2}	POTASSIUM MG/M ^{0.2}	SODIUM MG/M ^{0.2}	AMMONIUM AS N MG/M ^{0.2}
# OF SAMPLES	451.000	336.000	364.000	361.000	372.000
MAXIMUM	16.920	6.440	6.342	11.200	45.738
MINIMUM	0.013	0.013	0.009	0.020	0.004
RANGE	16.907	6.427	6.333	11.180	45.734
ARITH. MEAN	1.349	0.500	0.363	0.723	3.660
ARITH. STD. DEV.	1.552	0.666	0.603	0.946	4.195
GEOM. MEAN	0.802	0.275	0.200	0.437	2.132
GEOM. STD. DEV.	1.133	1.142	1.081	1.026	1.206
1ST QUARTILE	0.418	0.131	0.096	0.211	1.081
2ND QUARTILE	0.956	0.290	0.207	0.448	2.624
3RD QUARTILE	1.768	0.610	0.422	0.960	4.899

***** : INSUFFICIENT DATA

PART IX

STATISTICAL DISTRIBUTION COMPARISON OF OBSERVED CONCENTRATION

**STATISTICAL DISTRIBUTION COMPARISON OF OBSERVED CONCENTRATION
NORMALITY VS. LOG-NORMALITY**

CENTRAL REGION

Variable	Units	Sample Size	Critical D $\alpha = 0.05$	Observed Results			log _e (Observed Results)		
				Skewness	Kurtosis	D Statistic	Skewness	Kurtosis	D Statistic
Gauge Depth	mm	510	0.040	2.02	4.66	0.193	-0.30	-0.32	0.050
Conductance	umho/cm	305	0.051	2.21	8.36	0.162	-0.05	-0.04	0.036*
Field pH	-	234	0.058	1.77	8.65	0.099	0.10	4.94	0.080
Lab pH	-	455	0.042	1.67	5.24	0.115	1.06	2.87	0.089
Free Hydrogen (Lab)	mg/l	455	0.042	2.16	6.08	0.157	-1.67	5.24	0.115
Total Hydrogen	mg/l	297	0.052	2.48	11.38	0.138	0.16	0.28	0.039*
Sulphate	mg/l	461	0.042	1.86	4.57	0.126	0.74	1.37	0.055
Nitrate as N	mg/l	462	0.042	1.82	3.98	0.158	0.92	2.50	0.054
Calcium	mg/l	366	0.047	3.07	12.91	0.239	-0.06	-0.47	0.042*
Chloride	mg/l	454	0.042	3.27	15.21	0.197	-0.79	0.99	0.095
Magnesium	mg/l	374	0.046	3.11	13.40	0.260	0.03	-0.92	0.102
Potassium	mg/l	383	0.046	5.39	40.18	0.277	0.14	-0.46	0.117
Sodium	mg/l	383	0.046	5.14	35.86	0.281	0.0	-0.09	0.065
Ammonium as N	mg/l	386	0.045	1.48	2.36	0.143	-1.45	2.98	0.093

* D-statistic passes normality criterion

**STATISTICAL DISTRIBUTION COMPARISON OF OBSERVED CONCENTRATION
NORMALITY VS. LOG-NORMALITY**

NORTHWESTERN REGION

Variable	Units	Sample Size	Critical D $\alpha = 0.05$	Observed Results			log _e (Observed Results)		
				Skewness	Kurtosis	D Statistic	Skewness	Kurtosis	D Statistic
Gauge Depth	mm	107	0.086	1.76	2.49	0.209	-0.23	-0.64	0.068*
Conductance	umho/cm	57	0.117	3.60	16.20	0.238	0.53	0.56	0.084*
Field pH	-	18	-	-	-	-	-	-	-
Lab pH	-	94	0.092	0.44	0.96	0.070*	0.10	0.59	0.063*
Free Hydrogen (Lab)	mg/l	94	0.092	2.98	12.37	0.169	-0.44	0.96	0.070*
Total Hydrogen	mg/l	49	-	-	-	-	-	-	-
Sulphate	mg/l	86	0.096	3.33	12.10	0.279	0.23	-0.02	0.063*
Nitrate as N	mg/l	86	0.096	3.58	15.98	0.213	-0.96	2.55	0.094*
Calcium	mg/l	69	0.107	4.27	23.63	0.270	-0.03	0.09	0.087*
Chloride	mg/l	87	0.095	2.29	6.02	0.210	-0.44	-0.71	0.158
Magnesium	mg/l	69	0.107	3.72	15.43	0.322	0.97	0.07	0.245
Potassium	mg/l	69	0.107	3.50	13.49	0.297	0.49	-0.07	0.132
Sodium	mg/l	69	0.107	1.98	4.81	0.205	-0.01	-0.96	0.109
Ammonium as N	mg/l	67	0.108	4.20	22.72	0.251	-1.08	1.48	0.128

* D-statistic passes normality criterion

**STATISTICAL DISTRIBUTION COMPARISON OF OBSERVED CONCENTRATION
NORMALITY VS. LOG-NORMALITY**

SOUTHEASTERN REGION

Variable	Units	Sample Size	Critical D $\alpha = 0.05$	Observed Results			\log_e (Observed Results)		
				Skewness	Kurtosis	D Statistic	Skewness	Kurtosis	D Statistic
Gauge Depth	mm	537	0.039	2.24	5.81	0.208	-0.51	-0.12	0.068
Conductance	umho/cm	300	0.052	1.40	4.24	0.079	-0.60	0.25	0.077
Field pH	-	226	0.059	0.32	1.34	0.068	-0.16	0.67	0.072
Lab pH	-	433	0.043	1.82	5.41	0.117	1.23	2.82	0.090
Free Hydrogen (Lab)	mg/l	433	0.043	1.99	6.74	0.121	-1.82	5.41	0.117
Total Hydrogen	mg/l	300	0.052	1.26	2.32	0.091	-0.13	-0.34	0.040*
Sulphate	mg/l	438	0.043	1.85	5.70	0.107	-0.92	1.85	0.086
Nitrate as N	mg/l	445	0.042	4.99	38.34	0.186	-0.78	2.05	0.061
Calcium	mg/l	355	0.047	4.45	26.55	0.267	-0.03	-0.18	0.027*
Chloride	mg/l	430	0.043	3.09	14.01	0.179	-0.74	1.38	0.083
Magnesium	mg/l	341	0.048	5.34	40.80	0.293	-0.08	-0.63	0.087
Potassium	mg/l	378	0.046	4.48	27.55	0.261	0.09	-0.32	0.113
Sodium	mg/l	354	0.047	2.25	5.46	0.206	-0.20	-0.43	0.062
Ammonium as N	mg/l	406	0.044	1.63	3.16	0.142	-1.69	4.30	0.121

* D-statistic passes normality criterion

**STATISTICAL DISTRIBUTION COMPARISON OF OBSERVED CONCENTRATION
NORMALITY VS. LOG-NORMALITY**

SOUTHWESTERN REGION

Variable	Units	Sample Size	Critical D $\alpha = 0.05$	Observed Results			log _e (Observed Results)		
				Skewness	Kurtosis	D Statistic	Skewness	Kurtosis	D Statistic
Gauge Depth	mm	559	0.037	2.75	10.76	0.224	-0.37	-0.30	0.054
Conductance	umho/cm	276	0.053	1.52	2.49	0.138	-0.35	0.37	0.043*
Field pH	-	128	0.077	2.21	6.72	0.168	1.68	4.06	0.153
Lab pH	-	390	0.045	1.39	3.82	0.109	0.80	2.05	0.084
Free Hydrogen (Lab)	mg/l	390	0.045	3.59	21.42	0.175	-1.39	3.82	0.109
Total Hydrogen	mg/l	269	0.054	1.75	3.83	0.151	0.14	-0.07	0.043*
Sulphate	mg/l	459	0.041	2.23	8.42	0.141	-0.41	0.22	0.034*
Nitrate as N	mg/l	464	0.041	2.84	12.37	0.146	-1.15	3.19	0.082
Calcium	mg/l	330	0.049	2.59	9.53	0.192	-0.06	-0.63	0.053
Chloride	mg/l	451	0.041	5.75	56.67	0.227	-0.90	1.65	0.101
Magnesium	mg/l	336	0.048	2.26	6.61	0.188	-0.57	0.00	0.071
Potassium	mg/l	364	0.046	5.96	47.33	0.280	0.19	0.08	0.102
Sodium	mg/l	361	0.046	4.67	38.71	0.231	-0.09	-0.34	0.054
Ammonium as N	mg/l	372	0.046	3.71	21.22	0.163	-1.47	7.04	0.069

* D-statistic passes normality criterion

PART X

STATISTICAL DISTRIBUTION COMPARISON OF OBSERVED DEPOSITION

STATISTICAL DISTRIBUTION COMPARISON OF OBSERVED DEPOSITION
NORMALITY VS. LOG-NORMALITY

CENTRAL REGION

Variable	Units	Sample Size	Critical D $\alpha = 0.05$	Observed Results			log _e (Observed Results)		
				Skewness	Kurtosis	D Statistic	Skewness	Kurtosis	D Statistic
Free Hydrogen (Field)	mg/m ²	234	0.058	2.78	9.74	0.205	-1.33	6.15	0.072
Free Hydrogen (Lab)	mg/m ²	455	0.042	3.28	13.59	0.238	-1.09	2.23	0.079
Total Hydrogen	mg/m ²	297	0.052	2.41	7.34	0.173	-0.22	-0.17	0.052
Sulphate	mg/m ²	461	0.042	2.93	10.26	0.231	-0.50	0.49	0.047
Nitrate as N	mg/m ²	462	0.042	2.16	5.93	0.172	-0.93	1.51	0.072
Calcium	mg/m ²	366	0.047	3.27	12.98	0.250	-0.19	0.07	0.034*
Chloride	mg/m ²	454	0.042	8.20	107.68	0.264	-0.47	0.54	0.047
Magnesium	mg/m ²	374	0.046	4.10	21.70	0.282	-0.10	-0.34	0.031*
Potassium	mg/m ²	383	0.047	11.74	168.48	0.339	-0.24	0.28	0.031*
Sodium	mg/m ²	383	0.047	7.10	82.37	0.273	0.05	-0.48	0.045*
Ammonium as N	mg/m ²	386	0.045	2.42	6.79	0.212	-1.35	2.79	0.130

* D-statistic passes normality criterion

**STATISTICAL DISTRIBUTION COMPARISON OF OBSERVED DEPOSITION
NORMALITY VS. LOG-NORMALITY**

NORTHWESTERN REGION

Variable	Units	Sample Size	Critical D $\alpha = 0.05$	Observed Results			\log_e (Observed Results)		
				Skewness	Kurtosis	D Statistic	Skewness	Kurtosis	D Statistic
Free Hydrogen (Field)	mg/m**2	18	-	-	-	-	-	-	-
Free Hydrogen (Lab)	mg/m**2	94	0.092	3.12	11.89	0.256	-0.07	-0.49	0.052*
Total Hydrogen	mg/m**2	49	-	-	-	-	-	-	-
Sulphate	mg/m**2	86	0.096	3.47	15.63	0.257	-0.37	-0.02	0.071*
Nitrate as N	mg/m**2	86	0.096	3.10	12.49	0.224	-1.13	1.81	0.117
Calcium	mg/m**2	69	0.107	2.14	5.23	0.241	-0.21	-0.28	0.067*
Chloride	mg/m**2	87	0.096	6.36	49.48	0.297	-0.11	0.21	0.045*
Magnesium	mg/m**2	69	0.107	2.84	8.79	0.275	0.39	-0.44	0.105*
Potassium	mg/m**2	69	0.107	3.17	10.85	0.291	0.15	-0.18	0.069*
Sodium	mg/m**2	69	0.107	4.27	21.84	0.301	0.39	-0.02	0.068*
Ammonium as N	mg/m**2	67	0.108	2.69	10.50	0.205	-1.39	2.02	0.134

* D-statistic passes normality criterion

STATISTICAL DISTRIBUTION COMPARISON OF OBSERVED DEPOSITION
NORMALITY VS. LOG-NORMALITY

SOUTHEASTERN REGION

Variable	Units	Sample Size	Critical D $\alpha = 0.05$	Observed Results			\log_e (Observed Results)		
				Skewness	Kurtosis	D Statistic	Skewness	Kurtosis	D Statistic
Free Hydrogen (Field)	mg/m ³	225	0.059	4.68	26.53	0.281	-0.25	0.39	0.051*
Free Hydrogen (Lab)	mg/m ³	431	0.043	2.54	7.82	0.217	-1.23	2.59	0.080
Total Hydrogen	mg/m ³	299	0.052	2.14	5.37	0.163	-0.45	0.19	0.068
Sulphate	mg/m ³	436	0.043	3.21	14.95	0.215	-0.46	-0.03	0.063
Nitrate as N	mg/m ³	443	0.042	4.77	43.71	0.197	-0.95	1.35	0.099
Calcium	mg/m ³	354	0.047	5.06	35.78	0.270	0.03	-1.10	0.024*
Chloride	mg/m ³	428	0.043	5.60	51.19	0.242	-0.70	1.23	0.062
Magnesium	mg/m ³	340	0.048	6.69	60.20	0.307	-0.11	0.02	0.040*
Potassium	mg/m ³	376	0.046	7.60	90.99	0.264	-0.27	0.16	0.045*
Sodium	mg/m ³	352	0.048	5.44	48.97	0.251	-0.34	0.66	0.051
Ammonium as N	mg/m ³	404	0.044	4.23	31.55	0.219	-1.24	2.49	0.092

* D-statistic passes normality criterion

**STATISTICAL DISTRIBUTION COMPARISON OF OBSERVED DEPOSITION
NORMALITY VS. LOG-NORMALITY**

SOUTHWESTERN REGION

Variable	Units	Sample Size	Critical D $\alpha = 0.05$	Observed Results			log _e (Observed Results)		
				Skewness	Kurtosis	D Statistic	Skewness	Kurtosis	D Statistic
Free Hydrogen (Field)	mg/m ²	128	0.077	1.51	2.30	0.140	-1.49	2.65	0.162
Free Hydrogen (Lab)	mg/m ²	390	0.045	2.25	5.99	0.210	-0.90	0.89	0.090
Total Hydrogen	mg/m ²	269	0.054	1.78	3.75	0.154	-0.46	-0.50	0.095
Sulphate	mg/m ²	459	0.041	2.52	8.71	0.205	-0.51	-0.27	0.070
Nitrate as N	mg/m ²	464	0.041	1.67	3.54	0.153	-0.98	1.04	0.077
Calcium	mg/m ²	330	0.049	5.80	53.21	0.241	0.02	-0.14	0.026*
Chloride	mg/m ²	451	0.041	4.42	32.95	0.195	-0.69	0.65	0.068
Magnesium	mg/m ²	336	0.048	4.26	27.76	0.232	-0.20	-0.14	0.037*
Potassium	mg/m ²	364	0.046	6.52	56.00	0.279	-0.04	0.31	0.032*
Sodium	mg/m ²	361	0.046	5.52	47.86	0.229	-0.14	0.02	0.045*
Ammonium as N	mg/m ²	372	0.046	4.37	32.82	0.192	-1.17	3.22	0.100

* D-statistic passes normality criterion

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